2024 SOVE BOARD OF DIRECTORS

Lyric Bartholomay – President

Denise Bonilla – President-Elect

Lee Cohnstaedt – Vice President

Alexandra Chaskopoulou – Past President

Lal Mian – Southwest Regional Director

Ben Beard – Northwestern Regional Director

Steve Presley – Southcentral Regional Director

Nicole Achee – Northcentral Regional Director

Douglas Norris – Northeastern Regional Director

Edmund Norris – Southeastern Regional Director

Filiz Gunay – European Regional Director

Christina McCarthy – Latin American Regional Director

Hong-Liang Chu – Asian Regional Director

Ashwani Kumar – Indian Regional Director

Ayat Abourashed – Student Director

Marc Klowden – Editor, *Journal of Vector Ecology*

Lal Mian – Editor, *Newsletter*

Michelle Brown – Executive Director

Major S. Dhillon – Executive Director Emeritus

SOVE
Society for Vector Ecology

SOVE APPRECIATES ALL OF OUR SPONSORS

AZELIS A&ES

BILL AND MELINDA GATES FOUNDATION

CENTRAL LIFE SCIENCES

CLARKE

DR. MIR S. MULLA

LEADING EDGE ASSOCIATES

TARGET SPECIALTY PRODUCTS

VALENT BIOSCIENCES

VESERIS

SOVE
Society for Vector Ecology

SOVE EXTENDS A SPECIAL THANK YOU TO OUR PREMIER SPONSORS

GOLD SPONSORS

BILL AND MELINDA GATES FOUNDATION
CLARKE
DR. MIR S. MULLA
VALENT BIOSCIENCES

SILVER SPONSORS

BRONZE SPONSORS

CENTRAL LIFE SCIENCES
LEADING EDGE ASSOCIATES

SOVE APPRECIATES YOUR SUPPORT!

THANK YOU FOR BEING A PREMIER SPONSOR!

SOVE
Society for Vector Ecology

52ND 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
Vice President/Program Chair
USDA

AWARDS PRESENTATIONS

Lyric Bartholomay lyric.bartholomay@wisc.edu
President
University of Wisconsin-Madison, Madison WI

Denise Bonilla denise.l.bonilla@usda.gov
President-Elect

SOVE
Society for Vector Ecology

USDA/APHIS/Veterinary Services

PRESIDENTIAL ADDRESS

Lyric Bartholomay 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, cbb0@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
Hacettepe University, Turkey

LATIN AMERICAN SOVE
Christina McCarthy mccarthychristina@gmail.com
Universidad Nacional de La Plata, La Plata, Argentina

ASIAN SOVE
Rui-De Xue xueamcd@gmail.com
Anastasia Mosquito Control District, St. Augustine, FL

INDIAN SOVE
Ashwani Kumar 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

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
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 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 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 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 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 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

1:30 – 1:45 Current status of metatranscriptomic studies in hematophagous disease-transmitting vectors
Christina McCarthy mccarthychristina@gmail.com Universidad Nacional de la Plata, La Plata, Argentina

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 joohm@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 The Ohio State University, Columbus, OH

2:15 – 2:30 National network of research resources for vector-borne diseases

	Anna Powers akp7@cdc.gov Centers for Disease Control and Prevention, Fort Collins, CO
2:30 – 2:45	WHO Global Policies, Strategies, and Normative Guidance for Control of Dengue **Rajpal Singh Yadav** rajpal@yadav.cloud World Health Organization, Geneva, Switzerland
2:45 – 3:00	TBD
3:00 – 3:15	When ticks bite! Tick-bites and their contribution to alpha-gal syndrome (AGS) **Paulina Maldonado** lpmaladonado@arizona.edu University of Arizona, Tucson, AZ
3:15 – 3:30	Texas ranches: a nidus for Trypanosoma cruzi transmission among wildlife, dogs, and triatomines **Rachel Busselman** rbusselman@cvm.tamu.edu Texas A&M University, College Station, TX
3:30 – 3:45	**BREAK – SPONSORED BY VESERIS** **ASK THE EXPERT DISPLAY** **– LEADING EDGE ASSOCIATES**
3:45– 5:15	**SYMPOSIUM 3: VECTOR ECOLOGY**

Moderators:

Risa Pesapane
The Ohio State University
Columbus, OH
pesapane.1@osu.edu

Anna Fagre
Colorado State University
Fort Collins, CO
anna.fagre@colostate.edu

3:45 – 4:00	Towards a transboundary IMMP strategy using multidisciplinary vector surveillance **Filiz Gunay** 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 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 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 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 Cornell University, Ithaca, NY
5:00 – 5:15	Bite Diary: revealing patterns and factors of human-mosquito contract in Florida using a smart phone app-based survey **Panpim Thongsripong** thongsripong.p@ufl.edu University of Florida, Vero Beach, FL

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 Pennsylvania State University, State College, PA

P2 Using nanopore sequencing for mosquito species identification and confirmation
Linda Kothera lkothera@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 Tsafrakidou panag.tsafrak@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 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 Michigan State University, East Lansing, MI

P6 Synergizing Pyrethroid-treated Military Fabrics with Potassium Channel Blockers
Edmund Norris 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 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 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 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 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 USDA-ARS, Pullman, WA

P12 Circadian flight activity and vertical stratification of hemorrhagic disease vectors
Vilma Cooper-Montenegro 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 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 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 University of Georgia, Athens, GA

P16 Saccharine ceratopogonids: Determining sugar-source associations of Culicoides biting midges (Diptera: Certaopogonidae)
Chip Markwardt 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 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 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 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 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 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 Texas A&M University, College Station, TX

P23 Toward a transboundary IMMP strategy using multidisciplinary vector surveillance
Filiz Gunay filizgunay@ufl.edu University of Florida, Vero Beach, FL

P24 *Ae aegypti* and other mosquito species cohabitating in the Chekwouputoi cave, Uganda
Austin Mejia 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 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 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 Texas Tech University, Lubbock, TX

P28 Whole genome and mitogenome analysis of *Ixodes* spp. throughout the United States
Jacob Cassens 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 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 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 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@amcdfl.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 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 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 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 USDA, Manhattan, KS

P37 Impact of slope, aspect, and elevation on the distribution and abundance of *Dermacentor andersoni*
Brooke Shenkenberg 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@amcdfl.org Anastasia Mosquito Control District, St. Augustine, FL

P39 Evaluating pollen quantity by flower-visiting mosquitoes
Nalany Richson 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 University of California, Davis, CA

P41 Patterns of West Nile virus prevalence and levels in northern Colorado raptors

Catalina Puska 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 Colorado State University, Fort Collins, CO

P43 Evaluating the efficacy of *Bacillus thurigiensis israelensis* (BTI) in mosquito populations in northern Colorado
Logan Lowe 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 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 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 Leading Edge Aerial Technologies, Daytona, FL

P47 2024 RaHP Vec Utah aerial adulticide efficacy
Jessica Larsen 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 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
Alexandria Harris alexharris2781@gmail.com 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 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 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 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 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 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 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 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 Texas A&M University, College Station, TX

P58 Efficacy of factor permethrin-treated military uniforms in reducing mosquito biting rates under semi-field conditions
Thomas McGlynn Thomas.j.mcglynn7.mil@health.mil Navy Entomology Center of Excellence, Jacksonville, FL

P59 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 Kennesaw State University, Kennesaw, GA

P60 Hybridization of Ixodes scapularis behavioral phenotypes: observations of offspring behavior and survival

Jean Tsao tsao@msu.edu Michigan State University, East Lansing, MI

P61 Single nucleotide polymorphism detection using ddRAD-Seq of *Culex quinquefasciatus* and *Aedes aegypti* specimens
Jacqueline Sitko sjb2@cdc.gov Centers for Disease Control and Prevention, Fort Collins, CO

P62 Acquisition of *Borrelia burgdorferi* sensu stricto by *Haemaphysalis longicornis* nymphs during interrupted feeding
Christina Parise osb1@cdc.gov Centers for Disease Control and Prevention, Fort Collins, CO

P63 Factors associated with historical West Nile virus activity in northern Colorado
Zane Wilson zanewilson99@gmail.com Colorado State University, Fort Collins, CO

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

Moderators:

Tyler Sherman
Colorado State University
Fort Collins, CO
tyler.sherman@colostate.edu

Karen Poh
USDA-ARS
Pullman, WA
Karen.poh@usda.gov

9:00 – 9:13	New genome for the biting midge Culicoides sonorensis **Phillip Shults** 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 University of Arkansas, Fayetteville, AR
9:26 – 9:39	Genome-wide sequencing and oviposition dual choice experiments unravel the phenotypic basis of local adaptation in the major malaria vector Anopheles gambiae **Marilene M. Ambadiang** mae.marie1995@yahoo.com University of Yaounde, Yaounde, Cameroon
9:39 – 9:52	Microsatellites and single nucleotides reveal speciation within the Amblyomma maculatum group **Henrey Deese** 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 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 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 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

10:35 – 10:47 Understanding leishmaniasis transmission through analysis of single blood fed sand flies
Patrick Huffcutt 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
Jozylyn Propst 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 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 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 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 Osun State University, Osogbo, Nigeria

11:47 – 11:59 Assessing zoonotic risk of bovine fascioliasis and schistosomiasis at the wildlife-livestock interface around Lake Mburo National Park, southwestern Uganda

	Daisy Namirembe 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 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 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 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

Mitchell Kirsch
SC Johnson
Racine, WI
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 Centers for Disease Control and Prevention
2:00 – 2:10	Where do I fit: My career path so far **Jennifer Gordon** 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 Azelis Agricultural & Environmental Solutions
2:20 – 2:30	From science to service: The entomology and ecology team **Saul Lozano** nkq3@cdc.gov Centers of Disease Control and Prevention
2:30 – 2:40	Navigating career pathways beyond academia **Whitney Qualls** wqualls@amcdfl.org Anastasia Mosquito Control District
2:40 – 2:50	Networking: Over a decade of connections **Michael T. Riles** 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

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 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 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 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 West Valley Mosquito and Vector Control District, Ontario, CA
4:48 – 5:00	Efficacy of Biogents CO2 Generator Starter Kit as an Alternative to Dry Ice with Adult Mosquito Traps in Jacksonville, Florida **Sierra Schluep** sschluep@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 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 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

Karla Saavedra-Rodriguez
Colorado State University
Ft. Collins, CO
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 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 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 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@amcdfl.org Anastasia Mosquito Control District, St. Augustine, FL

8:56 – 9:10 Impacts of native Wolbachia infection on mosquito biology
Leena Salama l.salama@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 Vectech, Baltimore, MD

9:24 – 9:29 Compositional analysis and larvicidal activity of nanoemulsified *Eucalptus globulus* (family: Murtaceae) essential oil against *Aedes aegypti*
Komalpreet Kaur Sandhu
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

Bethany McGregor
USDA-ARS
Manhattan, KS
Bethany.mcgregor@usda.gov

Amy Hudson
USDA-ARS
Manhattan, KS
amy.hudson@usda.gov

10:00 – 10:15	How a hurricane impacted West Nile virus transmission in a desert **Jennifer Henke** 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 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 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 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 University of Colorado, Aurora, CO
11:15 – 11:30	Spatiotemporal modeling of zoonotic arbovirus systems: Challenges and opportunities **Lindsay Campbell** lcampbell2@ufl.edu University of Florida, Vero Beach, FL
11:30 – 1:00	**LUNCH (ON YOUR OWN)**
1:00 – 4:30	**MULTISTATE MEETING**

SOVE
Society for Vector Ecology

	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	
4:25 – 4:30	**CLOSING REMARKS**	

To submit a manuscript to the *Journal of Vector Ecology*, use the link above. To register to become a reviewer for the *Journal of Vector Ecology*, use the QR code above.

SOVE
Society for Vector Ecology

LEARN MORE ABOUT OUR SPONSORS!

AZELIS A&ES

ADAPCO is now d/b/a Azelis Agricultural & Environmental Solutions (A&ES). Azelis A&ES provides mosquito control Larvicides, Residual and ULV Adulticides, as well as Application Equipment and Technology to the professional public health mosquito and vector control agencies and organizations. Distributing reliable products from only dependable, industry leading manufacturers, Azelis A&ES offers solutions to our customers in their mission to protect against mosquitoes and prevent the transmission of vector-borne disease.
If you are a Public Health Vector Control Professional, Azelis A&ES should be a key link in your supply chain.

CENTRAL LIFE SCIENCE (Bronze Sponsor)

Central Life Sciences® products are a part of Central Garden & Pet Company. Central Life Sciences is dedicated to creating healthier environments and making life better for people, plants and companion animals around the world. As inventors of insect growth regulator technology more than 50 years ago, the founders of Central Life Sciences pioneered biorational pest control: using the insect's chemistry as a means to reduce pest populations. Altosid®, the industry's original and most trusted IGR larvicide is complemented by Zenivex® reduced-risk adulticides, Duplex™-G larvicide, Fourstar® extended residual microbials, bulk packaging options, corporate service programs and initiatives to aid the industry in protecting public health.

CLARKE (Gold Sponsor)

Clarke is a third-generation, family-owned public health products and services company, striving to elevate and transform the science of vector control through the lens of sustainability and innovation. Our mission is to help make communities around the world more livable, safe, and comfortable. Led by our core values of caring for people and the planet, we work to bring next-generation, environmentally responsible solutions to the global public health challenges associated with mosquito-borne disease. Learn more about Clarke's mosquito control products and integrated mosquito management service capabilities at www.clarke.com.

LEADING EDGE (Bronze Sponsor)

MapVision® (MV) is a web-based geospatial data management system designed specifically for the vector control industry to support and sustain the immense amount of data collected daily by district staff. Visually appealing reports are easily generated, making monthly board meetings a breeze. Intuitively designed worklows for surveillance, treatment applications and administrative tasks are automated and streamlined, further enhancing the efficiencies of mosquito control programs across the US, large or small.

PrecisionVision® is our line of Unmanned Aircraft Systems (UAS) - aka 'drones.' Based in the US, Leading Edge has a rich history of developing application drone technology, dating back to 2015. Our commitment to quality and customer support continues to this day making PrecisionVision® a trusted name among professionals and researchers in vector control, agriculture, forestry, noxious weed control, and aquatic vegetation management worldwide.

DropVision® droplet analysis systems have streamlined the manual droplet reading process for equipment calibration, characterization, and field efficacy work. Robust reports and graphs are automatically generated, providing solid validation that the low and ultra-low volume spray systems are compliant with federal label language. DropVision® AG software is designed for optimizing ground and aerial swaths (including granular applications), reinforcing that control products reach their targets throughout the entire season.

TARGET- SPECIALTY PRODUCTS

Target-Specialty Products delivers value-added solutions to Public Health Vector Control Professionals through innovation, products, supplies, application, education, and training opportunities. Our team of experts can advise on best practices for mosquito control, surveillance, emergency response, and treatment. Target-Specialty Products serves the Public Health Vector Control market from 44 locations across the United States and Canada.

VALENT BIOSCIENCES (Gold Sponsor)

As a global leader in public health vector control, Valent BioSciences has been working for decades to develop the most comprehensive range of target-specific biorational solutions for public health professionals who protect people around the world against vector-borne disease and nuisance insects.

Mosquitoes are one of the deadliest animals in the world today and mosquito-borne diseases are responsible for more than one million deaths per year. Sustained mosquito control efforts are critical to prevent outbreaks from these diseases, and Valent BioSciences' Public Health team works tirelessly with public health professionals across the globe to address the threat of mosquito-borne disease and to protect human potential around the world.

VESERIS

The preferred choice of public health professionals. Gain firsthand guidance on the latest products and treatments with Veseris. Whether you work for a vector control district or a company expanding into mosquito control, our public health specialists work by your side to help with everything from droplet and calibration testing to selecting the best surveillance and monitoring tools, larvicides, and adulticides for the job.