Society for Vector Ecology

SOVE Newsletter

President's Message

Isik Unlu

Dear SOVE Members,

As we are beginning to make some progress with Covid-19 vaccinations, perhaps we can start to shift some attention over to dengue cases in America and remember the small dengue outbreak in the Florida Keys last year. We also shouldn't forget the 60 human cases of West Nile virus in Miami last year. South Florida has started to receive an influx of Health Department reports concerning travel related dengue cases. Most Mosquito Control Districts are still conducting modified inspections due to Covid-19, including container-inhabiting mosquitoes, and with budgetary restraints. As vector control professionals, despite these various challenges, we continue our work in support of Public Health, even if we need to think outside the box. I am personally very excited about Lee County Mosquito Control initiating their Sterile Insect Technique earlier. I was told they've had a very promising start to this year with very little *Aedes aegypti* activity in the release area, compared to the control. As the rainy season begins, Lee County will be increasing their releases to try to stay ahead of high *Aedes aegypti* counts. They are currently releasing ~300,000 sterile males per week with plans to further increase this number. Lee County is also conducting extensive surveillance throughout the length of Captiva Island, and in the control area on Sanibel Island, with 58 BG Sentinel 2 traps set twice per week.

The SOVE board is busy preparing our upcoming Virtual Meeting. We have session on ticks (organizer: Ben Beard), sandflies (Bulent Alten), kissing bugs (Melissa Nolan), flies (Jerry Hogsette), mosquitoes (Greg Lanzaro and Stephen Su), and last but not least the student symposium.

. . . . . .***President's message*** cont'd on p.

In this issue

Southeastern US
Rui-De Xue
Regional Director

Dear Colleagues,

Florida Keys Mosquito Control District started to release over billons of the GMO *Aedes aegypti* in Key West to control dengue and Zika vector *Aedes* mosquitoes after more than 10 years of efforts. Up to May 3, 2021, Florida has one county under a mosquito-borne illness alert, 2 travel-related dengue fever and 3 malaria cases,. Also, 1 EEE horse, 27 sentinel chickens tested positive for EEE, 4 for WNV, and 1 for SLE in Florida. Due to warm temperatures and more rain fall, many districts/programs have started larvicidal and adulticidal applications. The Florida mosquito control association (FMCA) held a successful virtual Dodd short courses and held several other small classes in different areas. Lee County Mosquito Control District organized their aerial workshop and followed the CDC recommendation to limit the number of participates under 50 and kept the social distance. The FMCA plan to have the annual meeting in Hawks Key Resort, Duck Key, Florida where they were planned for several times in November 15-18, 2021. Anastasia Mosquito Control District its aerial operation and the Board of Commissioners awarded the construction of the Education Center Building (6,000 S.F.) to the Compass Group to be completed by the end of August, 2022. Welcome any donations including cash, old stuff, specimens, and tools to the Disease Vector Education Center. For more information about the donation, please contact Richard Weaver at rweaver@amcdfl.org or 904/471-3107. USDA/

Among other news, the Center for Medical Agricultural and Veterinary Entomology has hired Alden Estep as the new Molecular Entomologist, Edward Norris as the new Research Chemist. Eric Caragata has joined as Assistant Professor at the University of Florida/Florida Medical Entomology Laboratory. Edwin R. Burgess IV has been hired as Assistant Professor of Veterinary Entomology at UF/Department of Entomology and Nematology at Gainesville, and the department is in the process to hire a new faculty of Urban Entomology to replace Phil Koehler who retired last summer. Last but not least, let's congratulate Doug Carlson on his retirement a few months ago as Director of Indian River Mosquito Control District. Doug also served as President of the AMCA. Congratulation! Doug.

Rudy

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President's Message *continued from p. 1*:
Steve Mulligan and Michelle Brown are working continuously on the virtual meeting to make sure it would be a great experience for everyone who is planning to attend. Fingers crossed this will be our last 100% virtual meeting and hopefully we will be able to meet in person in 2022. Whether its mosquitoes or other vectors that demand your attention, have a great season.

Isik

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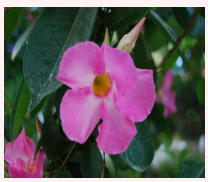


NORTH CENTRAL USA

Nicole Achee

Regional Director

Dear Colleagues and Friends,

Hoping all of you, your friends and family are continuing to stay healthy during the COVID-19 pandemic. Summer is (un)officially here! With temperatures rising and migratory birds returning to our region, media attention is focused once again on biting arthropods in the environment, diseases they may carry and prevention methods.

The 2020 mosquito-borne disease surveillance data reported to the Centers for Disease Control and Prevention (CDC) is now in the public domain. As of May 25, 2021, a total of 113 confirmed cases and 5 deaths from West Nile virus (WNV) have been reported from our Region. We can expect continued threats of WNV, eastern equine encephalitis (EEE), La Crosse and St .Luis encephalitis (SLE) in the upcoming months. For more information, and to access all graphics and educational material at your leisure, visit: https://www.cdc.gov.

Regarding tick activity and related tick-borne diseases, the CDC received reports in 2019 of a total confirmed 915 (613 probable) and 1,219 (959 probable) cases of Lyme Disease in Minnesota and Wisconsin, respectively, with both states falling under the high incidence category meaning at least 10 confirmed cases per 100,000 for three reporting years (Lyme Disease 2019).

Our Region is predicted for 'above average threat level' this summer season due to early-warm and wet weather. Do your part now to bring awareness to your family, friends and community on how to protect themselves from mosquito and tick exposure, especially as hospitals and health facilities are continuing to manage COVID-19 cases and implementing coronavirus vaccinations. Let's give the first-line health workers a break by making smart decisions on how to enjoy the outdoors and stay healthy!

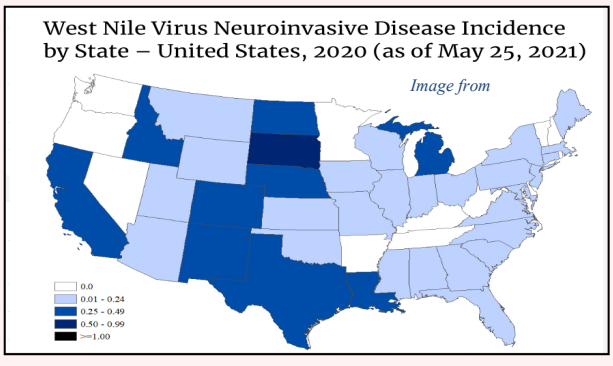
A ready prevention method includes wearing EPA-registered repellents, and you can find the right repellent for you by using the EPA's 'search tool' (see https://www.epa.gov/insect-repellents/find-repellent-right-you).

Remember, if you are asked whether mosquitoes or ticks can spread the SARS-CoV-2 virus, at this time, the CDC has no data to suggest that the coronavirus is responsible for the 2020 pandemic and is transmitted through this mechanism. You should also encourage those you know to reach out with such questions, we can all contribute to educating others about arthropod-borne diseases (see https://www.nature.com/articles/s41598-020-68882-7).

I hope you find the additional highlights below from our Regional family informative. Have a safe and wonderful holiday season, looking forward to seeing everyone in 2021, whether we gather virtually or in-person!

Sincerely,

Nicole



SOVE –Indian Region

Ashwani Kumar
Regional Director

Dear Colleagues,

The SOVE—Indian Region is in pursuit to promote scientific research, dialogue, discussion, exchange of ideas and training for better understanding of vector ecology and for effective control of vectors and vector borne diseases (VBDs). In tune with this mandate, a new lecture series on VBDs, called SOVE lect, using digital platform was launched, considering the ongoing COVID 19 pandemic. This activity was continued and further four video lectures of ~ 10-minute duration were launched on WhatsApp, Twitter and Facebook/ Youtube. The topics/lectures covered have been furnished below. So far eight lectures have been casted, which can be accessed at https:// www.soveindia.org/sovelect/

1) Kyasanur Forest Disease: An expanding tick borne public health problem in India by R. Paramasivan, ICMR-VCRC Field Unit, Madurai.

2) Microbial Bio-pesticides for Mosquito Control by S. Poopathi, ICMR-VCRC, Puducherry,

3) Triple drug regimen a potential choice to accelerate lymphatic filariasis elimination and scope of vector management by K. Krishnamoorthy, ICMR-VCRC, Puducherry) , and

4) Tick Survey Methods by A. Elango, ICMR-VCRC, Puducherry.

As per the Indian Co-operative Society's Act, SOVE's has to conduct its Annual General Body Meeting (AGM) every year. The Registrar of the Co-operative Societies suggested conducting the AGM in Goa during April 2021. The meeting of SOVE, India Region was held on April 30, 2021 at 10.00 AM at the ICMR-National Institute of Malaria Research, Goa. The discussions were centred around financial audit statement and other finance -related issues, holding elections of the Executive Committee, Adoption of Model Bye-Laws of Societies and to conduct symposia on virtual mode/ webinars on vector borne diseases (VBDs). The membership of SOVE Indian Region, in the recent times, has swelled to 96 from 65. Currently, there are 78 regular, 12 retired, 5 students and 1 institutional member. It would be our endeavour to cross the 100 mark in the next few months.

India is in the grip of second wave of COVID-19 pandemic. With 257,299 new cases on May 22, 2021, the Covid-19 case load in India scaled to 26,288,080, including 2,918,282 active cases, 23,063,698 cured/discharged and 295,560 deceased. India reported continuous decline in daily cases after reporting the highest number of cases 414,188 on May 7, 2021. COVID-19 Vaccination stands at 193,372,819 as on date. COVISHIELD, COVAXIN and SPUTNIK are being administered. The Government of India (GOI) is taking all necessary steps to ensure that we are prepared well to face the challenge and threat posed by the growing pandemic of COVID-19. The Ministry of Health & Family Welfare, Govt. of India, is empowering the citizens with right information, advisories and precautions to be taken to prevent the spread of the virus.

The COVID-19 pandemic has completed a little over one year of circulation and we are not certain when this chain of transmission would completely break. Therefore, the twin burden of co-infection/ co-morbidities of other infectious diseases and COVID 19 is expected to rise in the months to come. It would be challenging and perplexing to the medical fraternity whether to exclude from diagnosis acute febrile illness like dengue, chikungunya, malaria, scrub typhus, leptospirosis and typhoid, during the COVIDS-19 transmission season.

. . . . . ***Kumar*** continued on p. 8

Students' Corner

Kyndall Braumuller
kyndallb@email.sc.edu
Student Director

2021 Student Symposium: Apply to Present Your Work!

Happy summer to everyone!

I hope everyone had a great Spring 2021 semester, and I wish everyone a productive and enjoyable summer and field season. As we get closer to the SOVE 2021 Virtual Annual Meeting, I wanted to announce to the students that we are hosting a Student Symposium for the meeting, and we are currently accepting applications for student talks for this symposium! There is a Word document on the SOVE annual meeting website (https://www.sove.org/meetings) that you can download, fill out with your proposed talk information, and submit to admin@sove.org. This application is due no later than 11:59pm EST Friday, July 2nd, 2021! Notification emails will be sent out to all students who apply by mid-July. We are so excited about the Student Symposium and are looking forward to hearing about all of the amazing work our students have been conducting over the past 2 years. Please feel free to reach out to myself, Nicole Solano-Asamoah, or Kara Fikrig if you have any questions about the application form or about the Student Symposium.

Additionally, we are hoping to plan a virtual student mixer or social event of some kind after the regular hours of the virtual meeting. We know that it has been very challenging for students to network and communicate with each other like we normally would at our scientific conferences during the global pandemic. Through a virtual mixer, we can continue to build on these relationships and hopefully establish new ones like we would at an in-person meeting. Please look out for more information on this as we continue to develop this. Again, this would be after the normal hours of the virtual meeting so everyone can still attend all the talks and participate in the virtual meeting. Who doesn't like a little mixer and a morale-booster—all from the comfort of your own home or office??

Introducing: Nicole Solano-Asamoah, Student Director Elect

The student group voted and elected our newest Student Director Elect, Nicole Solano-Asamoah!! She will be our Student Director in 2022. I asked her 5 questions to introduce herself a little and her work.

Nicole Solano-Asamoah
Ecology PhD Student
Interdisciplinary Disease Ecology Across Scales (IDEAS) NSF NRT Program,
Odum School of Ecology, University of Georgia

1. What is your vector, and why?

My favorite vector has to be my study species, of course – *Aedes albopictus*. It's simple, elegant, and aggressive all in one. Nothing like seeing a freshly emerged *Ae. albopictus.*

2. What are you researching or exploring in your dissertation?

Broadly, my dissertation investigates the impact environmental factors have on vector-borne disease transmission, using a mix of fieldwork and computational methods. In August, I begin the 5th year of my PhD in ecology.

. . . . . ***Solano-Asamoah*** *cont'd on p. 6.*

Solano-Asamoah *cont'd from p. 5 . . . .*

3. How has the COVID-19 pandemic affected your research/dissertation or your school program, if at all?

Right before COVID-19 was declared a global pandemic, I had flown to Ghana to visit my husband. My flight to return to the U.S. was canceled due to border closures. This caused me to be in Ghana for a lot longer than previously imagined and unfortunately, I was unable to make progress on my research while I was there, therefore adding an extra year to my degree. COVID-19 also caused my last chapter to become a purely computational chapter, which would have otherwise been a mix of fieldwork and computational methods. Overall, COVID-19 has increased the amount of time it will take me to complete my degree.

4. What advice can you give other students whose research or dissertation has been impacted by the COVID-19 pandemic?

To others that have had their research or dissertation impacted by COVID-19 pandemic: (1) you're not alone, (2) things WILL work out, (3) although it may (often) feel like it, the world is not ending, (4) we got this!, (5) we have just been forced to take a step back, re-evaluate/assess, and come up with a new plan, (6) but we have experience in updating plans/protocols, so we can do this and make it work for us! (7) Don't forget to talk to loved ones and connect with your support team as often as needed; it's okay to ask for help often.

5. What are you most excited about this SOVE 2021 Virtual Annual Meeting?

I am excited to hear everyone's research story and learn about vectors I haven't thought or heard much about before.

Welcome Nicole and thank you for dedicating your time to leading the student group at SOVE!!

Kyndall

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Strickman Memorial Student Award

Tackling Chagas on All Fronts in Florida

Norman Beatty made it his mission to confront Chagas disease head-on when he joined the University of Florida as a faculty member of the College of Medicine. “Chagas disease is in need of urgent attention and has been neglected for way too long” says Beatty. Assembling a team of multidisciplinary researchers, they set out to investigate on all fronts, *Trypanosoma cruzi* in the sunshine state.

Knowing that a large population of at-risk Latin Americans were living in Florida and had immigrated from endemic regions a prevalence study was born with the help of Mundo Sano, a non-profit organization dedicated to tackling Chagas with Beatty. Beatty states, “Despite having an ongoing COVID-19 pandemic in front of us, we were able to launch our program and began to unearth cases of Chagas”. He goes on to say, “the research has been extremely gratifying and has led to several individuals who have received treatment and ongoing management”. Working alongside Rhoel Dinglasan at the Emerging Pathogens Institute and the Southeastern Center of Excellence in Vector Borne Diseases we have a found a diverse population of Latin Americans at-risk for Chagas. “The hope is this research will shine light on the fact that people are living with this disease here in Florida without a diagnosis and access to much needed health care”, says Beatty.

For Beatty, the vector is where his journey with Chagas disease began. Combing the deserts of Arizona and northern Mexico during his medical training at the University of Arizona with his mentor Stephen Klotz, led to an excitement with the bug. “Kissing bugs are smarter than they look and some species have a particular interest in human dwellings” explained Beatty. “I was aware that kissing bugs had been intruding homes in Florida from my discussions with Sarah and Gabe Hamer from Texas A&M, but nothing had been published for some time on the extent of kissing bugs in this region of the U.S.” With the help of a Chanakya Bhosale, an eager medical entomology student who is on his way to medical school and others from the laboratory of Samantha Wisely, we set out to find the bug! Joining forces with the Hamer Lab at Texas A&M we were astonished to see that the kissing bug was quite common and located throughout the state. So far, we have isolated a kissing bug from 15 different counties, many of which were associated with human dwellings.

Finding the bug was one thing, but would we find *Trypanosoma cruzi*? One would suggest that if you look hard enough you will almost undoubtedly find the parasite where you find the bug, but no one had looked here for several decades. So, we started looking and wanted to go deeper. Working with Wisely and Sarah Mays Maestas, PhD student, we constructed a wildlife investigation to assess whether *T. cruzi* was present among opossums and racoons, and whether there was any difference in those collected in urban or rural settings in north Florida. To our surprise we did find *T. cruzi* in both species, with greater than one and four opossums infected and both urban and rural populations also infected.

So, we dove into our bug investigations and to no surprise we detected *T. cruzi* DTU 1 and 4. Zoe White, biological scientist in the Wisely Lab has been essential at the molecular detection of this often times finicky pathogen. Dissecting kissing bugs can be quite the experience! Utilizing the help of Nathan Burkett-Cadena and his graduate student, Tanise Stenn, we dove into blood meal analysis. Our bugs in Florida have a lot to feed on which was evident in our first round of testing, including domestic pets. Leading to a discussion with Cinda Crawford at the College of Veterinary Medicine at the University of Florida. Having a stored sample set of shelter dogs and cats from a previous study, we shipped samples to Texas A&M Veterinary Medical Diagnostic Laboratory for serologic testing. To our surprise again, we detected *T. cruzi* antibodies in multiple specimens, some of which had come from south Florida. Wherever we were looking we were finding *T. cruzi*!

This takes us to the work of Carson Torhorst (pictured right), a graduate student in the Department of Wildlife Ecology and Conservation here at the University of Florida. Carson has set out to map and

Beatty *cont'd from p. 7:* construct a spatial investigation of *T. cruzi* among a vast array of mammals in our state. Working with Beatty and Wisely, and other collaborators we intend to explain the complex biology of *T. cruzi* in the state, and assess whether humans are at-risk. As Carson explains, "the current research is incredibly interesting as we are on the forefront of understanding how this parasite interacts with its hosts in the different environments. We will also compare how the parasites interacts differently with its native hosts in the sylvatic and peridomestic landscapes."

Chagas disease is a complex infectious process that involves a fascinating vector! The time has come to recognize that more *T. cruzi* research is needed right here in the U.S. We do not know the extent of whether humans or our companion animals are at-risk for this infection, but ongoing studies are showing that autochthonous Chagas is found throughout the southern portions of the U.S. wherever the kissing bugs are found.

To reach Norman Beatty for questions about his research related to Chagas disease, please email him at: norman.beatty@medicine.ufl.edu.

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Kumar *continued from p. 4:* Amidst COVID-19 pandemic there is growing concern over the transmission of vector borne diseases (VBDs) during the monsoon beginning early June in India. With monsoon at our doorstep, and as the country is getting respite from the summer heat, the arrival of monsoon poses several challenges, with health as the principal concern for all. As VBDs are expected to rise during monsoon, extensive sanitation measures and LSM (larval source management) will be needed along with rapid antigen testing (RAT) in rural areas. Limitation of movement of human resource will impede vector control, surveillance and other allied activities, during this challenging phase.

Situated in the south-eastern part of the country and from where I am officiating as Director of Indian Council of Medical Research-Vector Control Research Centre, the Union Territory of Puducherry, has reported that 93167 people are so far affected with COVID-19 in Puducherry. 73936 out of 93167 have recovered. Sadly, 1295 patients have died due to coronavirus in Puducherry; 17936 patients are still in hospital and recovering. Reliable sources indicate that twenty people including a couple of government servants have contracted black fungus (mucormycosis) infection. The Lieutenant Governor has said that the infection would soon be declared a notifiable disease under the Epidemic Diseases Act, 1987. Information from the print media indicates that this infection is spreading. In the early part of the year we kick started all our field projects/activities, but whichever took off have came to a grinding halt. However, the laboratory experimentation and studies are progressing, with scientists putting their heart and soul in publishing their earlier and current findings. Vector biologists, like others, are increasingly participating in online WEBINARS which have become an order of the day.

Amidst the testing times, we foresee efforts to initiate new SOVE activities in India in the coming months.

Friends! Stay focused, safe and healthy and we shall soon overcome this pandemic hopefully soon!
The Key to Safety Is in our Hands!

Ashwani Kumar

CDC Southeastern Center of Excellence In Vector Borne Diseases (SCEVBD)

News & Update

Triple (Virus) Threat: Leveraging SECVBD Connections for Outbreak Response

In the second half of 2020, Miami, FL was experiencing an outbreak with not just one, but three viruses circulating simultaneously: SARS-CoV-2, West Nile, and dengue viruses. In an effort to quickly respond to the vector-borne disease threats despite COVID-19-related personnel and space limitations, we leveraged existing relationships between Miami-Dade Mosquito Control District (MDMCD), the University of Miami, and the greater SECVBD network to provide increased mosquito pool testing; this allowed for rapid turnaround of test results and, in turn, data-driven, localized vector control by MDMCD. MDMCD trapped, morphologically identified, and sorted mosquitoes by location to create pools of 2-25 mosquitoes of the same species from the same trap location. Members of the arboviral research team in the Dinglasan laboratory at the Emerging Pathogens Institute (EPI) at the University of Florida then screened *Aedes sp.*, *Anopheles sp.*, and *Culex sp.* collected by MDMCD for arboviruses of public health concern in Florida: West Nile virus (WNV) and dengue virus (DENV). Positive pools were reported directly back to MDMCD within a week of sample receipt for targeted vector control (i.e., insecticide spraying). Remaining homogenate was retained and shipped for subsequent secondary positive pool confirmation by the Florida Department of Health (FLDOH) as well as the CDC. In total, 548 pools were tested for DENV (N= 5079 mosquitoes) and 188 pools were tested for WNV (N= 2589 mosquitoes). 4 pools were found to be DENV-2 positive, 9 pools were found to be DENV-4 positive, and 9 pools were found to be WNV positive (See Figure 1); local DENV-1 and WNV human cases were reported in Miami-Dade county during this period. This collaboration showcases the added value of the CoE networks, as findings of positive mosquitoes allowed MDMCD to respond to the outbreaks with increased surveillance and vector control in affected areas.

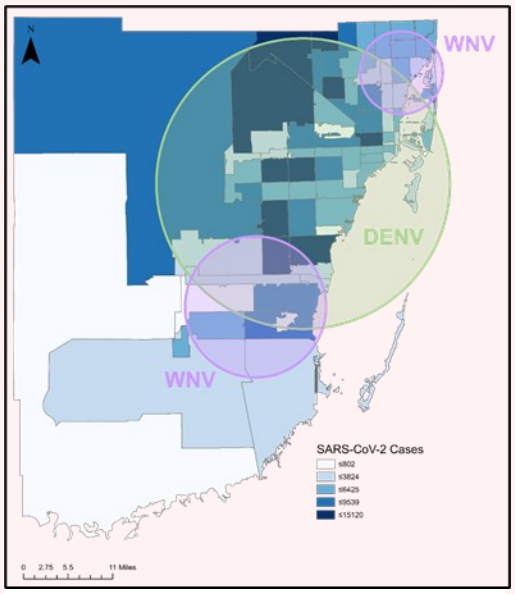

Fig. 1. Circulating arboviruses in Miami-Dade County, FL as determined by mosquito pool data testing results, amid SARS-CoV-2 outbreak. July-December 2020. Figure courtesy of H. Coatsworth.

Recent Tick-Related Publications and Activities

SECVBD researchers are tackling an emerging threat to the US: tick-borne diseases. A quick glance at what we've been up to:

Greg Glass (University of Florida, Program Project 3) and previous trainees Claudia Ganser and William Kessler have recently published validated tick species distribution maps that can be used to inform the risk of tick exposure throughout Florida, with resolution down to an area the size of a football field. These maps were transferred to the state of Florida to assist in epidemiologic surveys of reported tick-borne diseases. Check the maps out in detail in the recent publication.

. . . . . ***SCEVBD*** *contd on p. 11*

SCEVBD *contd from p. 9*: Samantha Wisely, Phil Kaufman, and Yuexun Tian (University of Florida, Program Project 3) have created new tick and tick-borne disease fact sheets, which are published online and available to access for free. These fact sheets include introductions to and medical/veterinary significance of common ticks found throughout the southeast, serving as a resource to a variety of agricultural, operational, and general audiences. Link to factsheets: Facts about wildlife diseases: *Ehrlichiosis* and Asian Longhorned Tick. Keep an eye out for upcoming factsheets on *Ehrlichia* and *Anaplasma,* by Yuexun Tian, Eva Buckner, and Cynthia Lord.

Sadie Ryan (University of Florida, Program Core 2), Alexis White (formerly University of Florida, Core 2), and Holly Gaff (Old Dominion University) recently collaborated on a systemic review of published studies including spatial data, models, or mapping analyses of tick-borne pathogens or vector maps. Their findings identify approaches to use existing methods to track distributions of tick-borne diseases in historically neglected areas. Read the full publication on tick-borne disease geography here.

Looking ahead, we are gearing up for our largest intern cohort in SECVBD history, consisting of 23 dedicated tick surveillance interns spanning 8 states of the southeast. Interns are hosted by leading vector-borne disease experts throughout the region and support a unified effort for the rigorous surveillance of ticks, including tick abundance, distribution, identification, and vouchering. This effort also will enable spatial mapping of tick vector distribution, which will be used to create a suite of species distribution models for the region. Additionally, host sites are harmonizing tick-borne pathogen testing for all ticks collected across the southeastern United States, laying the groundwork for expanded tick and tick-borne disease surveillance.

Virtual Training Opportunities Expanded. We are up to over 1,000 people enrolled in our **Online Mosquito Training Course**, and we have expanded the states eligible for Continuing Education credits to Florida, Alabama, South Carolina, and Colorado! The course was developed by Philip Koehler and Rebecca Baldwin of the UF Entomology & Nematology Department, and it serves as introduction to mosquitoes and mosquito control for pest managers and public health entomologists. Topics include identification of mosquitoes, their life cycles, control methods, PPE, and laws and regulations of mosquito control. Access the mosquito course here!

By popular demand, we recently launched a tick counterpart to the online mosquito course. Developed by Holly Gaff and Alexis White, the **Online Tick Training Course** introduces tick biology, identification, surveillance, and management; tick-borne diseases; and how these topics connect to overall public health. This course is available for free through UF|IFAS and is currently approved for 2 CEUs through the Florida Department of Agricultural and Consumer Services. Enroll in the tick course here!

After last year's successful Lyme Disease Lunch & Learn webinar series, we joined up again to co-host an **All-CoE webinar series**, held each month from January through May 2021. Topics included invasive species, vector control methods, VBD training programs, forecasts/modeling, and vector biology. We saw close to 300 attendees at each session – thanks to everyone who joined! Missed this series? Stay tuned, we may be holding another round in the future!

Keep up to date with the latest from the SECVBD: Visit our website; Follow us on Facebook and Twitter.; Subscribe to our mailing list ; Check out the All-CoE Facebook page.

In Memoriam and Retirements to Note

from our Region and broader Vector Ecology Community

Michael John Bangs 1956—2021

Michael J. Bangs passed away on March 9, 2021 at the age of 64, succumbing to complications from lymphoma diagnosed in 2020. He was born on September 7, 1956 in Bathesda, Maryland. After graduating in Biology from Northern Arizona University, Mike served for three years in the Peace Corps in and around Sabah, Malaysia (northern Borneo) working with the State malaria control program. He subsequently studied at the University of California, Los Angeles (UCLA) and earned a Master's degree in medical entomology and another in public health - infectious disease epidemiology. Following that, he spent nearly 21 years in the US Navy as a public health entomologist assigned as a Preventive Medicine Officer working almost entirely overseas in multiple and diverse locations, the bulk of that time in Southeast Asia (primarily Indonesia). During his Navy years, he was privileged to be sponsored to obtain a PhD in medical entomology, work that exposed him to Central America.

Following his retirement from military service in 2006, Mike joined a private medical assistance company, International SOS, as Director of Vector-borne Disease Control Programs. Based in Papua, Indonesia, this multi-faceted job involved everything from conducting vector-borne disease risk assessments (predominately malaria and *Aedes*-borne diseases), assessing current vector and pest control programs, to the design and implementation of large integrated vector management and disease control programs, primarily for the extractive industry (mining and energy). A prolific researcher and a talented writer, Mike authored over 250 research articles on vector control, insecticide resistance and vector-borne disease epidemiology. He also consulted with the Bill and Melinda Gates Foundation on their global malaria prevention initiative and was an adjunct professor and advisor with several world-renowned universities, including the University of Oxford and the University of Notre Dame. Over the years, he served as a mentor for numerous PhD candidates. Mike was a phenomenal conversationalist and storyteller, with numerous interests outside of work, he will be missed. Please visit the InMemori webspace for Mike, where you can post and view others' photos, tributes and memories.

Nicole Achee

SOVE North Central Region

LIFETIME ACHEIVEMENT AWARD

Nancy C. Hinkle

University of Georgia

The Friends of IPM have selected Nancy C. Hinkle of the University of Georgia's Department of Entomology as the 2021 recipient of their Lifetime Achievement Award, citing her "extraordinary achievements in research and Extension over a career in Veterinary Entomology." Because most veterinary pests also serve as vectors (fleas, ticks, flies, etc.), not only is Hinkle considered an expert in animal pests, but she likewise is viewed as an authority on disease carriers and their suppression.

Throughout her career, Hinkle's research and Extension outreach have improved pest management by development of IPM programs that are then conveyed to Extension audiences, including livestock and poultry producers, Extension agents, and pest management professionals.

Because so few veterinary entomologists are employed in academia, her program has spanned the range of veterinary pests, focusing mostly on those affecting livestock, poultry, and companion animals. Hers continues to be the definitive voice concerning fleas, flies, northern fowl mites, and darkling beetles.

Not only does she emphasize that animal agriculture needs integrated pest suppression options, but she acquaints her pre-med students with IPM approaches as critical in the One Health concept, encompassing human, animal, and environmental health.

For over forty years, Hinkle has made outstanding contributions to the field of IPM through her research, extension, and professional service, the benefits of which have been realized nationally and internationally. Hinkle served as SOVE's president in 2009 and was honored as recipient of SOVE's 2018 Distinguished Achievement Award. Congratulations! Nancy, you have earned it, ed.

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Calendar

NIAID Workshop

On behalf of the National Institute of Allergy and Infectious Diseases (NIAID) of the National Institutes of Health (NIH), we would like to invite you to participate in a workshop entitled "Targeting the Parasite Within the Vector: Exploring Novel Approaches to Prevent Transmission of Vector-Borne Diseases" that will take place virtually on July 20-21, 2021 (draft Agenda can be found in the registration site).

The purpose of this 2-day workshop is to explore approaches that target the pathogen within the vector host as tools to prevent transmission to humans. If you are interested in participating, please register for the workshop using this link: https://cvent.me/ovwwWV. Registration will close on **July 14, 2021**. Feel free to share the registration link with colleagues that may have an interest in participating in the workshop.

Job Opportunity

Job Description : A Europe-based position to manage the Valent BioSciences' Public Health and Forest Health portfolio of business in the European and Middle Eastern Regions. Responsible for managing the Regional Technical Development Specialists, including their development, evaluation and performance. Coordinate and lead development of annual regional business plans. Develop and manage the expense budget. Identify and respond to government tenders. Identify and develop distribution agreements with appropriate partners. Coordinate with VBC Development and Marketing staff to prioritize VBC activities that meet company expectations for sales and profit. Maintain strong understanding of technology/biotechnology of products in the Public Health and Forest Health markets. Establish strong relationships with key accounts, opinion leaders, channel partners and other stakeholders. Understand and convey the VBC Public Health and Forest Health mission and value proposition to protect human potential and forest health throughout the stakeholder value chain. Work well in a matrix environment with R&D, Marketing, Customer Service, Regulatory, Finance and IT. Work with regional and headquarter regulatory professionals to assist in maintaining current product registrations and registering new products.

Experience:

—5-10 years' experience in regional territory management with different countries and cultures within the European and Middle Eastern Regions.
—Proven experience as business manager.
—Distribution and team management
—Organizational and leadership skills.
—Communication and interpersonal abilities.
—Diverse business and strategy development.
—MS Office, databases (Smartsheets) and manage CRM (SalesForce) implementation.

Education: BS/BA degree; MBA desired.

Travel: 60% based on seasonal needs and pending corporate / local government allowances per COVID travel restrictions.

For more detailed information

Contact **Jason Clark** at
Jason.clark@valentbiosciences.com

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Resources

BEI Resources for Vector Biology Research

NIAID's BEI Resources program (www.beiresources.org) provides Vector Biology resources for free to registered, approved researchers in domestic and foreign institutions with appropriate facilities and containment procedures for vector research. Our widely requested holdings include LIVE arthropod vectors of human disease, including anopheline and culicine mosquitoes, reduviids, ticks and sand flies, associated reagents and genomic materials for entomological research, along with insectary protocols. For the cost of nothing, recipients are only required to acknowledge the use of the individual resources in publications and presentations of the research in which the materials are used.

BEI Resources arthropod colonies are made available by the deposit contributions of investigators throughout the world. Deposited materials undergo review by NIAID prior to acceptance. Please notify BEI Resources through the Suggest A Reagent Form if you have a request for inclusion or the Deposit Inquiry Contact Form if you have a unique strain for consideration.

Vector Biology resources available through BEI Resources will remain available throughout the current coronavirus pandemic. Orders and/or shipping of certain live vectors may be delayed or temporarily on hold depending on the current operating status of individual insectaries for mosquitoes, ticks, reduviids and sand flies. BEI Resources is pleased to announce the upcoming availability of black fly life stages through a partnership with the University of Georgia Black Fly Rearing and Bioassay Laboratory, which has operated the only known colony of black flies (Diptera: Simuliidae) for over 20 years. Since its establishment, the *Simulium vittatum* colony has been used for a variety of research projects, including vector transmission studies, environmental monitoring, vector control and larval feeding studies. For mor information contact:

Adriana Costero-Saint Denis, PhD
Vector Biology Program, NIH,
Phone: 240-292-4284
Email: acostero@niaid.nih.gov
https://www.niaid.nih.gov/research/vector-bio

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www.sove.org

About SOVE . . . . .

The Society for Vector Ecology is a nonprofit professional organization formed in 1968 by a group of individuals involved in vector biology and control programs in California. The membership has since grown to represent an amalgamation of diverse research, operational, and extension personnel from all over the world. The Society is committed to solving many complex problems encountered in the field of vector biology and control. Among these are the suppression of nuisance organisms and disease vectors through the integration of various control options, such as environmental management, biological control, public education, and appropriate chemical or non-chemical control strategy.

The Society publishes the biannual Journal of Vector Ecology that contains research and operational papers covering many phases of vector biology, ecology, and control. The Society also issues a quarterly newsletter and holds an annual conference in September/October.

2021 SOVE Board Members, Editors

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