



SOVE Newsletter

President's Message



Dear members and supporters:

Greetings and happy spring to all. From my perspective in Michigan, “spring” began in mid-February with tick questing activity and larval mosquito hatches occurring way ahead of normal for our area. Also in February, I attended the CDC Foundation Zika and *Aedes aegypti* control summit meeting in Atlanta along with several other SOVE board and supporting members. It was a well-organized conference, with excellent speakers covering a wide range of topics related primarily to control methods and their evaluation. It was also a great time for me to visit with colleagues, some of whom I hadn’t seen for some time. Thus it was a worthwhile meeting, but I’m not sure I learned much that was new, and any consensus from the meeting regarding control approaches will almost certainly contain a statement something to the effect of “there is no magic bullet – a

combination of methods should be used that vary with locale”. This is partly due to my involvement in SOVE which addressed many of the same topics at our meeting in Anchorage, partly due to my awareness of issues surrounding Zika during my numerous attempts last year to convince Michigan residents they had little to fear about local transmission, and partly due to a feeling that I spend half of my waking hours attending meetings!

One topic from the conference that did get me thinking, in retrospect, about vector-borne disease control approaches, was public perception and involvement. This was covered during a session that stood out from others in that it was more interactive and consisted of reading and listening to non-scientists’ comments on vector control and disease risk, then collating our responses on what we had expected them to say. Not surprisingly, several in my group, including me, were initially skeptical and dismissive of this portion of the meeting. Yet, this is an important, even primary consideration that *presidential message cont’d. on p.2*

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Regional Reports



SOUTH CENTRAL USA

STEVE PRESLEY, regional director

Planning and operations for mosquito surveillance and control are fully underway in Texas and throughout the south central United States in response to the threat of Zika virus local transmission and other arboviruses. After a mild winter throughout most of the south central region, combined with unusually large rodent population numbers resulting from relatively high precipitation rates during the past two spring seasons (2015 and 2016), the threat of various other vectorborne diseases is significant. Increased incidence of tick-borne diseases such as Bourbon and Heartland viruses, ehrlichiosis, Rocky Mountain spotted fever, and tularemia cases are likely. Additionally, increased incidence of vectorborne diseases of veterinary concern such as epizootic hemorrhagic disease (EHD) in cervid populations (particularly farmed cervids), and Chagas disease in working canines, are likely to be realized throughout the south central region this summer.

As professionals directly or indirectly working in the field of vector ecology, whether working as a vector control district specialist or manager, an industry representative, or an academic researcher, it is incumbent upon us to work together to ensure the public health. This can only be accomplished through communication of our findings and lessons learned, and through collaboration to find effective and efficient integrated intelligent vector management strategies and approaches.

If you are a member of SOVE and live in the South Central Region, please send me an email (steve.presley@ttu.edu) with any news or information

(e.g., awards and grants, promotions, relocations, vector ecology news, new vector control/surveillance equipment, methods, programmatic issues, conferences, meetings, job opportunities, etc.) that you would like disseminated to the membership.

Presidential message from p. 1.

many of us in the scientific community tend to ignore. Those of you in vector control operations are, of course, much more aware of the importance of dealing with public concerns, but for many of us involved in fundamental research or development of novel approaches, the public side of things represents a very real bottleneck in implementation that is often not fully considered. When the use of naled in response to the Zika emergency in Puerto Rico was curtailed by public outcry despite its utility in combating resistant populations of *Ae. aegypti*, human health disease risks were almost certainly increased. Limitations to the use of alternative, next generation control efforts such as genetically modified vectors will likely be centered on convincing citizens to allow release. This has already been apparent with resistance to the Oxitec male mosquito releases and will no doubt be more difficult if/when widespread release of genetically modified female vectors becomes an option (as Greg Lanzaro spoke to during our Anchorage meeting). As the age of readily available misinformation continues to prosper, perhaps SOVE should consider putting more resources into addressing public ignorance

See more presidential message on p. 3.

Regional Reports



NORTHWESTERN USA

David Sullivan, regional director

It looks as if winter is almost over in the Northwest, but one never knows for sure.

In most of the territory the winter has been wetter than normal. The west coast has been hammered with multiple record rain and snow storms. The mountains in all of the northern states have had normal or higher than normal snow during these winter months. This extra moisture has many of the residents worried about potential floods all along the rocky mountain front. In Montana, the water shed that flows into the Missouri River has more snow than normal and could cause major flooding all along the Missouri and Mississippi Rivers this spring/summer. Weather forecasters predict that valleys will have more rain with snow in the mountains for most of this week, which will cause additional flooding.

There have not been many vector issues this winter and it will probably will not start until next month. Plague was reported in Broomfield, Colorado in Mar 2017 after a Prairie dog die off near the Great Western Reservoir Open Space and Health officials warned people to avoid contact with fleas in prairie dog areas.

The Northwest Mosquito & Vector Control Association (NWMVCA) Spring workshop will be held in Richland, Washington at the Red Lion Inn on April 11 & 12, 2017.

The NWMVCA yearly meeting will be hosted in Whitefish, Montana on October 3-5, 2017.

The Montana Mosquito & Vector Control Association (MMVCA) will hold their Spring workshop at Great Falls, Montana on May 24th 2017.

The Idaho Mosquito and Vector Control Association spring workshops will be held May 9 in Pocatello, and on May 11 at Nampa. These meetings will focus on larviciding and adulticiding techniques.

The NWMVCA is now in need of an Executive Director since Jason Kinley became VP of AMCA. The Executive Director is a non-paying position and candidate must be in the Northwest region.

Many districts throughout the Northwest are in the process of hiring temporary staff to handle the upcoming mosquito season. All those that are interested contact your local mosquito districts.

Presidential message p. 2. about vector ecology and control so that research presented at the many conferences we attend has a better chance of having an impact. And speaking of meetings and impacts, the program for our upcoming meeting in Mallorca is shaping up nicely, thanks to Bulent Alten and symposia organizers. It is among the select few meetings I will attend this year that I'm honestly looking forward to. Here's hoping that you have a great spring and summer season. See you in Spain.

Cheers,

Mike

Regional Reports



NORTHEASTERN USA

ISIK UNLU, regional director

This week New Jersey hosted an exciting and unique event at AMCA headquarters, Mt. Laurel. AMCA and CDC will be developing comprehensive, interactive “Train-the-Trainer” (TTT) workshops in geographically diverse locations: Arizona, California, Colorado, Florida, Kentucky, Louisiana, New Jersey, North Carolina, Texas, and Virginia.

It is the strategy of this initiative to organize trainers and support so that an efficient and cohesive communication, delivery, and evaluation strategy can be executed. Since the number of end learners and consequently, the number of trainers required across the participating states is unknown, there will be a Master Trainer strategy used to drive effective rollout and sustainability.

The Master Trainer Event will be held March 22 and 23, 2017 at the AMCA headquarters in Mt. Laurel, NJ, where two designated Master Trainers from each state will receive Master Certification. This certification will:

- Enable them to experience the training as an end user
- Practice delivering key components of the training
- Provide what they need to coach and certify local trainers for each geographic area
- Give them time to network and build their knowledge regarding different areas of the country
- Enable them to participate on conference calls to share best practices, challenges, and solutions

Each Master Trainer will work with their Master Trainer colleague from that state to organize and deliver the number of Train-the-Trainer sessions necessary for initial rollout. The Master Trainers will also add value to local departments by observing and coaching trainers, ensuring consistency of delivery, and fielding

questions as end user training rolls out.

State Mosquito Control Commission update March 2017 (Scott Crans):

The 2016 mosquito season saw some change in the office of mosquito control coordination as noted in previous reports. Zika in the press on an almost daily basis was cause to address the topic in a manner exceeding routine operations. The goal was to get in front of something we at the state level hoped would not happen. That said, preparing for the possibility was necessary. Engaging the public to actively participate in the process was paramount. Encouraging residents and travelers to take simple precautions to avoid exposure to biting mosquitoes was and still is critical. This recommendation was offered from the perspective of protecting our resident mosquito populations. This may sound a bit odd, but our goal was to minimize the possibility of introducing the virus into the mosquito population using people as the front line. Encouraging people to take some personal responsibility and protecting themselves from mosquito bites while traveling and following traveling events was stressed along with reducing the opportunity of available larval habitats around where people live work and play. DEP and DOH partnered to develop and convey a consistent public health message that would help to produce this outcome. This public service announcement was provided on a regular basis leading into and throughout the mosquito season. In addition, direct funding to all the county mosquito control operations was offered to increase capacity for Zika virus surveillance and control and \$500,000.00 in available SMCC funding was provided to meet this emerging need. Twenty of our county based mosquito control programs took advantage of this funding opportunity and put the state resources to work during the 2016 mosquito control season. The CDC ELC funding (\$690,000.00) eventually became available through a long standing cooperative rela-

Regional Reports



EUROPEAN SOVE

EVA VERONESI, regional director

Dear Colleagues: Many interesting things happened in these recent months. First of all, I would like to express my best compliments to Alexandra Chaskopoulou for her election as next Director of the European Society for Vector Ecology! This is great news indeed, and knowing Alexandra very well I am absolutely sure that she will be an excellent ambassador for the European Scientific Community and that she will give an extraordinary contribution to promote our science and to give new inputs to the E-SOVE. Her mandate will start at the International Conference in Palma (first week of October 2017), until then we will work together to strengthen and sustain what has been done so far.

I have just returned from the kick-off meeting of an extremely innovative international and interdisciplinary research project which I am proudly part of: Infravec2 “Research infrastructures for the control of vector-borne diseases”. This four year project is coordinated by Kenneth Vernick, Head Unit of Insect Vector Genetics and Genomics Department of Parasites and Insect Vectors, at the Institute Pasteur of Paris (France). The project is funded by the [European Union’s Horizon 2020 research and innovation programme \(INFRAIA, grant agreement n.731060\)](#). The amazing concept of Infravec2 is that the EU will fund 24 partner infrastructure consortia to provide a list of 50 products and services at no cost to the end-user. The list of these and products and services is very long and it will be available online. Overall it includes several items such

as insect vectors infected with class 2 and 3 pathogens (arboviruses, *Plasmodium falciparum*), derived products of the infected vectors (RNA, protein extract), new vector colonies and pathogen strains, vector genomic and bioinformatic services, insecticide screening, secure insectary and genomics training courses, and researcher physical access to secure insectaries with unique capabilities, such as behavioral or insecticide research under class 3 containment conditions. The providing partner will be reimbursed by the project on an actual-cost basis. The goal of this large networking project is indeed to fill gaps in infrastructures allowing research sustainability and to overcome obstacles and lack of resources. Eligible vector researchers will be those in the EU, 16 associated European countries, and 130 developing countries. More information can be found:

<https://research.pasteur.fr/en/project/infravec2-research-infrastructures-for-the-control-of-vector-borne-diseases/> The Institute Pasteur has also launched a massive open online course (MOOC) about medical entomology and vector-borne diseases such as malaria, dengue, Zika, Lyme borreliosis, Chagas disease etc.. This 6-week free online course, coordinated and run by Anna-Bella Failloux (Unité Arbovirus et Insectes Vecteurs, Institut Pasteur, Paris) and Vincent Robert (Unité MIVEGEC, Institut de Recherche pour le Développement, Montpellier), was open to many categories (e.g., students in biological or medical science, public health advisors, and stakeholders in vector control). If you are interested please see the following webpage:

<https://www.fun-mooc.fr/>.

.....see more Veronesi on p. 8.

Regional Reports



SOUTHEASTERN REGION

Rui-De Xue, regional director

The CDC Foundation held a summit on vector control strategies for *Aedes aegypti*-transmitted Zika virus February 27-28, 2017 in Atlanta, GA. The meeting was well organized, successful, and very informative. The summit sought innovation in vector control tools, evaluation and application methods. Attendees came from USDA/CMAVE, University of Florida, University of Miami, Florida International University, Florida Department of Agricultural and Consumer Service, Department of Health, Anastasia Mosquito Control District, Lee County Mosquito Control District, and a couple of Vendors.

The CDC awarded the Southeastern Excellent Center for Vector-borne Diseases to the University of Florida/EPI, University of Miami, University of South Florida, and Florida International University. The new center will, in collaboration with UF/IFAS, USDA/CMAVE, NECE, and several local mosquito control agencies and associations, conduct surveillance, training, and applied research. Rhoel D.R. Dinglasan of the UF/EPI is the Director for the new Center.

Barry Alto, UF/IFAS/FMEL received a grant award from Florida Department of Health (DOH) for virus detection and faculty of Florida International University received funding from Florida DOH for their research on Zika and its impact on brain cells and other research. We welcome Derrick Mathias who has recently joined the faculty of the UF/IFAS/FMEL.

Anastasia Mosquito Control District hired Tom

Columbus, M.S. in Entomology, as the station's new supervisor and Molly Clark as the new Education Specialist. Miami-Dade is searching for a new Director for Mosquito Control Division and requires a Ph.D. in Entomology or Biology. Florida Key Mosquito Control District is searching for Deputy Director for Operations. South Walton Mosquito Control District and Pasco County Mosquito Control are searching for Entomologists.

Anastasia Mosquito Control District and USDA/CMAVE will organize the 14th Arbovirus Surveillance and Mosquito Control Workshop (www.amcdsjc.org), March 28-30, 2017, in St. Augustine, FL. The workshop is in conjunction with the NE 1443 regional project 3rd annual meeting.

Florida Mosquito Control Association (www.floridamosquito.org) had a short course on aerial applications in Lee County Mosquito Control District in January, and Dodd had their short course in Orlando in January/February. Florida Entomology Society (www.flaentsoc.org) will hold their 100th annual meeting in Puerto Rico in mid-July. There are some 12 people going from Florida to attend the 5th International Forum for Surveillance and Control of Mosquitoes and Mosquito-borne Diseases held May 22-26, 2017, in Nanjing, China (www.mosquitoforum.net).

PAMCA REPORT

3RD Annual Conference of PAMCA

September 6-9, 2016, Lagos, Nigeria

by

Charles Mbogo, CMbogo@kimri.wellcome.org

The 3rd Annual Conference of the Pan African Mosquito Control Association (PAMCA) was held at Sheraton Hotel, Lagos, Nigeria from September 6-9, 2016. The conference was hosted by the Society for Mosquito Control in Nigeria (SMCN) in collaboration with the National Institute of Medical Research (NIMR), Nigeria. The theme of the three-day conference “*Control of Mosquito Vectors: Opportunities & Challenges in the 21st Century*” was structured around five subthemes and organized into scientific sessions, plenaries and symposia.

The over 200 conference participants from 13 countries in Africa, Asia, United States and Europe were mainly from academia and research institutions, private and commercial sector, policy makers, non-governmental organizations, developmental partners, media and other stakeholders. The conference officially opened by the Minister of Health represented by the Director General of the Nigerian Institute of Medical Research in Nigeria. Proceedings at the conference included a key-note address, four plenary sessions, five oral scientific sessions, two poster presentation sessions, and four symposia. In addition, the industry exhibited old and new vector control products during the 3-day conference. Some of the industry participants included Bayer, Syngenta, IVCC, Vestergaard, Harvest Field, Sumitomo, Inquaba biotech and Westham Ltd, to name a few.

Highpoints of the discussions centered on emerging and re-emerging vector-borne diseases, the threat of insecticide resistance, policy on vector control, new innovative vector control tools, communities and private sector contributions to vector control and operational research for sustainable implementation of vector control programs. The keynote address was delivered by Abraham Mnzava who focused on the theme of the conference and pointed out salient and topical issues for vector control and the need for multidisciplinary approach for mosquito control. He reiterated that while we have made progress by gaining ground against malaria and most of the mosquito-borne diseases, we face a new set of challenges that require us to seek new ways to outsmart these newly evolving disease trends.

Highlights on some of the symposia included “*new challenges and new tools for malaria vector control*” and “*leveraging gene drive technology for innovative vector control*”. The symposium on new challenges and new tools for vector control was moderated by Fredros Okumu and highlighted the limitations and challenges with current vector control best practices and pointed out the needs for more aggressive targets for mosquitoes control, and possibly elimination. Mosquito transmitted diseases such as malaria, dengue, chikungunya and Zika were the focus of the discussions. The round table discussion also pointed out the need for the use of additional tools with proven efficacy such as odor-baited traps, improved housing and environmental management and other new technologies. It was also the consensus of participants that PAMCA has the largest single grouping of vector control experts and should therefore play a key role in defining the agenda of Mosquito Control in Africa.

The second symposium was organised by Target Malaria “*Leveraging gene drive technology for innovative vector control*”. This was the first formal introduction of Target Malaria to an audience of African entomologists and other malaria specialists. It came at a time when discussions about the use of new approaches for vector control, including gene-drive technology, have been featured prominently in scientific publications and mainstream media. The PAMCA meeting was an opportunity to engage the African scientific community in the discussion about the application of gene drive technology for vector control, in particular malaria. The goal of Target Malaria is to develop an innovative tool for malaria control. It is investigating two approaches: biasing the male to female ratio of mosquitoes, with an increasingly male mosquito population leading to a reduction in the overall population; or reducing female mosquito fertility, also leading to a reduction in mosquito population size. In both cases, the reduction in the population of malaria-transmitting mosquitoes would be expected to contribute to interrupting malaria transmission. The project is currently focused on three sub-species of mosquitoes from the *Anopheles gambiae* complex, representing a very small proportion of mosquitoes in Africa, but the most important malaria vector in the region.cont'd p. 10.

Regional Reports

Unlu p. 4 cont'd:

These funds were requested through DOH prior to the mosquito control season and their arrival welcomed. An interagency agreement was formulated to pass the funding out to the county mosquito control agencies through the State Department of Environmental Protection's Office of Mosquito Control Coordination. These official procedures often take some time in state government for all parties to eventually sign off on the required documents. Knowing this bureaucratic process would likely not be quick was the primary driving force behind making existing state resources available to the counties last July. The NJ State Mosquito Control Commission (SMCC) through the Office of Mosquito Control Coordination (OMCC) is in the process of distributing the remaining funds to the cooperating county programs for the upcoming season. We anticipate all county programs will take advantage of this funding. As such, participating county programs will be sharing Asian Tiger mosquito trapping data, participating in professional meetings, attending an insecticide resistance workshop and performing the CDC bottle bioassay on local populations of the *Aedes albopictus* prior to the end of the state's fiscal year. Effects of superstorm Sandy continue to stress the mosquito control infrastructure. *Aedes sollicitans* populations are recovering from what we believe to be storm related effects and were cause for the state program to invest considerable resources the past two seasons. In anticipation for another active season on top of the Zika virus activities, SMCC has reprioritized budget resources. Our statewide arbovirus surveillance data system is undergoing a much-needed overhaul to meet these emerging challenges and in anticipation for those that will *come*.

Veronesi p. 6 cont'd..

Our entomological society just got together in Antwerp (February 21-23, 2017) for the AGM of VectorNet (European Network for sharing data on geographic distribution of arthropod vectors transmitting human and animal disease agents). The project is jointly funded by the European Centre for Disease Control (ECDC, Sweden) and Safety Authority (EFSA, Italy). More than 60 European experts in medical and veterinary entomology and public and animal health attended the meeting sharing data collected on the distribution and abundance gaps for ticks, mosquitoes, sand flies and *Culicoides* from all European countries. Astounding were the amount of data collected in the field since the beginning of this project (June 2014) and the number of people involved in all the tasks. For more information please visit the webpage <https://vectornet.ecdc.europa.eu/> or contact vectornet@ecdc.europa.eu, if you would like to join the network.

Last but not least, the 8th European Mosquito Control Association (EMCA) conference just concluded in Montenegro (Bečići, March 12-16, 2017), which hosted more than 130 participants from 24 countries among Europe and overseas. The full programme, counting 60 oral presentations, 7 keynote speakers, and more than 30 posters, was tackling new technologies on mosquito surveillance and control, public health issues, the importance of the Balkans as an entry gate for vector-borne pathogens and their vectors, citizen science as a tool for mosquito surveillance, and many other topics. For more information please visit the EMCA webpage <http://www.emca-online.eu>, where you can also find useful information on upcoming courses and training in mosquito control.

FINANCIAL STATEMENT 2016

Society for Vector Ecology - Annual Financial Statement JANUARY - DECEMBER 2016

BANK BALANCES- DEC 31, 2015:	\$312,340.36	Certificates of Deposit
Funds invested in Certificates of Deposit, May 2006:		\$100,000.00
Interest Earned on Certificates of Deposit thru 2015		\$11,879.14
Interest Earned Jan-Dec 2016		\$39.31
Certificates of Deposit December 31, 2016		<u>\$111,918.45</u>

	<u>INCOME</u>	<u>EXPENSES</u>
Dues/Membership	\$28,355.00	
Royalties	\$21,196.38	
Page Charges	\$21,072.00	
JVE Editing Charges	\$205.00	
Interest	\$204.61	
Other Income	\$789.58	
Total Income: Jan -Dec 2016	\$71,822.57	

General:		
Visa/MC Merchant Fees		\$1,727.99
Bank Service Charges		\$605.00
PayPal Charges		\$762.94
Business Lunches/Entertainment		\$50.85
Office Supplies		\$497.37
Travel Expenses/Travel Other/Misc.		\$6,154.36
Total General Expenses:		\$9,798.51

Computer:		
Software		\$179.88
Webhosting/Constant Contact		\$714.00
		<u>\$893.88</u>

2016 - 47th Annual Conference		
Registration	\$36,060.00	
Sponsorship	\$6,500.00	
Hotel		\$2,956.00
Excursion		\$15,800.00
Poster Boards		\$1,055.00
Audio Visual		\$1,140.00
Student Stipend		\$2,400.00
Petty Cash/Tips		\$130.00
Travel		\$1,214.36
Programs		\$340.20
Awards		\$178.20
Badges/Bags/Pens		\$398.33
Supplies		\$931.52
Honorarium		\$2,500.00
Hospitality/Dinner/Receptions		\$17,547.78
Misc.		\$690.34
	<u>\$42,560.00</u>	<u>\$47,281.73</u>

FUND RECONCILIATION

Taxes:		
2016 FTB Filing Fee		\$55.00
2016 Tax Prep		\$400.00
Total Taxes Expenses:		\$455.00

Postage:		
Misc. Postage		\$20.43
Total Postage:		\$20.43

Services:		
Mark Klowden-Editor		\$5,000.00
Anne Klowden		\$12,205.00
Valerie Montigny-Secretarial Services		\$9,375.00
Webmaster		\$2,550.00
Total Service Expenses:		\$29,130.00

TOTALS FOR Jan -Dec 2016	\$114,382.57	\$87,579.55
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CBB Bank - 5207 Bal. Fwd 12/31/15	\$200,879.24
CBB Bank - 3688 Bal. Fwd 12/31/15	\$110,123.67
Paypal - Bal Fwd 12/31/15	\$1,337.45
Income	\$114,343.26
Expenditures	\$87,579.55
Bank Balance 12/31/16	\$339,104.07
Certificate of Deposit	\$111,918.45
TOTAL FUNDS	\$451,022.52
Ending Bal from Bank Statements December, 2016	
CBB - 5207	\$225,783.32
CBB - 3688 (Savings)	\$110,288.97
Paypal	\$2,751.78
Undeposited Funds	\$280.00
	\$339,104.07

Variance \$0.00

PAMCA from p. 7 cont'd:

This work is currently on-going in 3 African countries; Mali, Burkina Faso and Uganda. This symposium offered participants an opportunity to discuss new technology especially gene drive as it relates to malaria vector control. Participants were also of the opinion that this deserted area should be accorded the necessary attention as it could provide alternative tools for vector control. Following extensive deliberations during the conference, the following key issues and recommendations were made: 1) The critical gap in public health entomology capacity in African national programs and institutions, 2) The need to enhance and harmonize entomological surveillance and intervention monitoring/evaluation to support evidence-driven vector control across Africa, 3) That national vector control programs in the African region should proactively prepare for and take ownership of the evaluation and uptake of validated new tools for vector control, such as those discussed at the conference, 4) There is a need to harmonize the different vector control initiatives and activities across Africa so as to have an aligned and comprehensive agenda, 5) That national and sub-national vector control unit/s should emphasize proactive insecticide resistance management. Accordingly, national insecticide resistance monitoring and management plans should be finalized with priority, in line with the WHO Global Plan for Insecticide Resistance Management in malaria vectors, 6) PAMCA should play a more active role in supporting policy formulation and capacity building, and contribute to the development of the Global Vector Control Response to ensure relevance and utility for the African region, and 7) PAMCA should establish a peer-reviewed international journal so as to showcase and disseminate the breadth of high quality research on entomology and mosquito control being undertaken across the continent

There is a need for simple, action oriented interventions to ensure sustainability of community interventions for successful mosquito control at the grassroots level.

Please mark your calendar
the forthcoming

7th Congress of SOVE

October 1-6, 2017

Palma, Mallorca Island

Spain

Look for further announcements in coming months

OBITUARY



Dr. Richard C. Axtell (Dick), a giant in the disciplines of Medical and Veterinary Entomology passed away on January 24, 2017. Dick was born August 4, 1932 in Medina, New York to the late Franklin and Marion (Thomas) Axtell. After receiving his B.A (1954) and M.A. (1955) degrees in the biological sciences from the State University of New York at Albany, Dick received a Fulbright Fellowship (1955-56) as Visiting Instructor in Zoology, College of Agriculture, University of Philippines. He served two years (1956-58) on active duty in the U.S. Army (Medical Entomology Division, Army Chemical Center, MD). In 1959 he was admitted into the Department of Entomology Cornell University as a PhD candidate in the lab of veterinary entomology pioneer George Matthyse. His doctoral research was on manure-inhabiting macrochelid mites (Acarina:Mesostigmata) predaceous on the house fly. He received his PhD in 1962.

In 1962 he was hired as assistant professor by the Department of Entomology, North Carolina State University, where he remained for his academic career, obtaining the rank of Professor in 1969. During his career at NCSU, he directed the research and training programs of 35 graduate students (15 Ph.D. students and 20 M.S. students) and 18 postdoctoral research associates in the field of medical and veterinary entomology. He published ca. 200 papers during his career, covering a wide diversity of arthropods of medical and veterinary importance (mites, house flies, tabanids, mosquitoes, biting midges, eye gnats, and ticks) reflecting his wide areas of interest. These publications included research papers, book chapters and technical publications. He

RICHARD C. AXTELL

1932-2017

by

Daniel Kline and Chris Geden

made more than 170 presentations at various scientific meetings. His research mainly emphasized the development of management programs for arthropods affecting poultry, livestock and humans. His research was well funded throughout his career by grants from at least 10 organizations and agencies. He also received support from industry and customer/stakeholder groups. His research program had emphasis on both basic and applied studies to support the development of sustainable management programs. He had research projects on poultry ectoparasites, house fly population management, and mosquito biocontrol agents. His research program emphasized integration of biological and chemical control of flies and mosquitoes. Dick was the first entomologist to propose IPM approaches for livestock and poultry pests and developed sampling methods and action thresholds for their implementation. He oversaw the development of computer simulation models of fly and mosquito population management and application of expert systems for pest population management in livestock and poultry production. After 34 years of faculty service, he became Professor Emeritus in 1996.

He was an active member of many professional societies including the American Mosquito Control Association (AMCA)(President 1982-83), National Livestock Insect Workers Conference (LIWC)(Chairman 1982), Entomological Society of America (ESA) (Secretary of Section D---Medical and Veterinary Entomology---1985; Chairman Section D in 1986), Mid-Atlantic Mosquito Control Association (President 1988), North Carolina Mosquito and Vector Control Association (President 1976), Acarology Society of America, Georgia Entomological Society, Society for Invertebrate Pathology, Florida Mosquito Control Association, Society for Vector Ecology (Editorial Board, Bulletin SOVE), Livestock Insects Biocontrol Coordinating Committee, South Carolina Entomological Society, and North Carolina Entomological Society.

JOB Opportunity

Insect Vectored Diseases and Mosquito Ecology Cluster Hire

University of California, Riverside

The University of California, Riverside seeks outstanding candidates for four faculty positions in various aspects of insect-vectored diseases and mosquito ecology to be filled at the Assistant or Associate Professor rank. This cluster hire currently seeks collaborative scientists examining issues related to (1) human pathogen-insect vector interactions (Assistant rank), (2) mosquito ecology/evolution (Assistant rank), (3) infection and immunity in a mammalian system against vector-borne diseases (Assistant or Associate rank) and (4) bioinformatics and computational biology of human vector-borne diseases and their insect hosts (Assistant rank). Despite recent progress for understanding the biology and for the control of insect-vectored pathogens, vector-borne diseases continue to exert a major toll on humanity. In tropical countries, insect-borne diseases claim more than a million lives per year and impart a huge cost on often fragile economies. Recent outbreaks of vector-borne diseases illustrate that no nation is immune to potentially serious consequences from emerging and re-emerging pathogens. The Center for Disease Vector Research and the School of Medicine at U.C. Riverside include faculty utilizing interdisciplinary approaches to study vectors and their associated pathogens, and to ameliorate suffering from diseases caused by the insect-vectored pathogens. We seek to add highly motivated and talented faculty to synergize ongoing research activities and promote the development of innovative control strategies for both vectors and diseases they cause. These individuals will build on existing strengths in fundamental and applied research in disease vector research. We plan to hire four positions in this cluster over the next two years. For more information about our hiring initiative, please visit (clusterhiring.ucr.edu) or (academicpersonnel.ucr.edu).

Questions regarding this position should be directed to Dr. William Walton, Chair of the Insect [Vectored Diseases and Mosquito Ecology Cluster Hire Search Committee](#) at william.walton@ucr.edu. Review of applications will begin on March 30, 2017 and continue until the [position is filled with an anticipated start date of either July 1, 2017 or July 1, 2018](#). Assistant level applicants should apply through: (<https://aprecruit.ucr.edu/apply/JPF00699>). Senior applicants for the infection and immunity in a mammalian system against vector-borne diseases position should apply through (<https://aprecruit.ucr.edu/apply/JPF00705>). Applications should include a cover letter, curriculum vitae (6 pages maximum), statements of research interests (3 pages maximum), teaching interests and philosophy (2 pages maximum), a statement of contributions to diversity (1page maximum), copies of recent significant publications and names and contact information for four references. Candidates applying for the Assistant Professor position will need to provide four names for letters of reference. Individuals applying for a position above the Assistant level will be required to provide names and contact details for confidential references.

University of California Riverside is a world-class research university with an exceptionally diverse undergraduate student body. Its mission is explicitly linked to providing routes to educational success for underrepresented and first-generation college students. A commitment to this mission is a preferred qualification. Advancement through the faculty ranks at the University of California is through a series of structured, merit-based evaluations, occurring every 2-3 years, each of which includes substantial peer input.

For Your Calendar

The 5th International Forum for Surveillance and Control of Mosquitoes and mosquito-borne Diseases will be held in Nanjing, China, May 22-26, 2017. For more information, please visit the meeting website at www.mosquitoforum.net or www.asiansvcmc.org

The 4th Annual Conference of the Pan-African Mosquito Control Association will be held October 16-18, 2017, in Ougadougou, Burkina Faso. For more info, please contact: <http://events.pamca.org>.

Jobs

Director, Mosquito Control Division

Department of Solid Waste Management
Miami-Dade County, Florida
(Salary: \$97,391-154,174)

This is a highly responsible position directing countywide mosquito control operations. Position is responsible for providing strategic, operational and administrative leadership. Requires a Ph.D. in Entomology, Public Health, Natural Resources, Engineering, or related field, plus five years experience in mosquito control with pest control applicator's license and public health director certification. For more information, contact: Judith Deutsch at (305) 375-2687, or Judith.Deutsch@miamidade.gov. Please apply at www.miamidade.gov/jobs.

Resources

FREE Resources for Investigators are available! Please visit: <http://www.niaid.nih.gov/labsandresources/resources/dmid/Pages/default.aspx> to see the full range of available services that provide access to research tools and technologies and preclinical and clinical services to facilitate product development.

Visit [Vector Biology Resources for Studying Vectors](#) for a

listing of available resources. Key among the resources for studying vectors is provision of LIVE vectors and reagents and genomic materials offered through the [BEI Resources Repository](#). (See Vector Resources in the BEI [online catalog](#).) These resources are available free of charge to REGISTERED users in domestic and foreign institutions and NIH grant funding is not required. For information on all resources for researchers provided by DMID, visit the [DMID Resources for Researchers website](#).

[Adriana Costero, PhD](#)

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Obituary from p. 12 cont'd...

During his career Dick received many honors, awards, consultantships and served on numerous advisory panels. His awards included Fulbright Scholar, Meritorious Service Award (AMCA, 1978), Distinguished Service Award, North Carolina Entomological Society (1982), Award for Excellence in Integrated Pest Management, SE Branch, ESA (1987), and Lifetime Achievement Award in Veterinary Entomology (LIWC, 1993).

While very influential in both medical and veterinary entomology, Dick was probably more influential in veterinary entomology. Many of our veterinary entomologists can trace their roots back to Dick. He and his unique sense of humor will truly be missed.

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Society for Vector Ecology

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www.sove.org

About SOVE

The Society for Vector Ecology is a 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 and 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 integration of control elements, such as environmental management, biological control, public education, and appropriate chemical control technology.

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 distributes a periodic newsletter and holds an annual conference in the months of

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