



SOVE Newsletter

President's Message



Warm greetings (literally - it's been nearly tropical in Michigan recently) to everyone!

I hope the summer vector season is keeping everyone busy but still allowing you to plan your travels to Mallorca in October. The program is almost finalized and it looks typically great. (a more famous president would probably tweet "phenomenal program - the best ever!", but I'm a bit more low-key). The combination of seaside venue and expanded International Congress will make this year's meeting one not to be missed. Many thanks to Bulent Alten, Miguel Chueca, and Norbert Becker for organizing and hosting this event.

In addition to the International Congress, SOVE board members have been actively dealing with by-law revisions, the establishment of an Indian SOVE chapter, and plans for next year's meeting which will mark the 50th anniversary of our organization. As we approach the annual conference, we will al-

so be charged with selecting nominees for the next vice-president and for the Distinguished Achievement and Distinguished Service award recipients. You are welcome to submit suggestions of nominees to me or other board members.

Since this is my penultimate newsletter column, I'd like to share a few thoughts on the future of SOVE. We have reasons to be very optimistic, and these include the remarkable financial stewardship of Major Dhillon, the rise of international chapters in Europe, Latin America, Africa, India and Asia, and the continuing support of long-term members in the US. That being said, I think we need to keep exploring ways to encourage and increase student participation. A comment I heard recently from a student who attended a SOVE meeting for the first time was (paraphrased): "I enjoyed the meeting and the venue, but felt the program was dominated by a bunch of old white guys talking about mosquito control."

.....presidential message cont'd. on p.7

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Regional Reports



NORTHEASTERN USA

ISIK UNLU, regional director

Forty Zika virus cases have been reported in our region including New York (26), New Jersey (1), Pennsylvania (3), Massachusetts (6), Maryland (3), and Delaware (0) based on the CDC website (January 1, 2017 – June 14, 2017). The month of May started rainy and ended the same way with more days of clouds and rain than sunshine in Mercer County, NJ. Overall temperatures were slightly below average with overcast conditions prevailing. Most of the service requests are related to *Aedes vexans* this year. Because of the mild winter and Zika virus in the headlines last year, residents still have concerns. Since tires are one of the most preferred habitats of *Ae. albopictus* in the area, we have been spending more time on tire recycling compared to previous years.

A grant on "Climate Change, Nuisance Mosquito Populations, and Long-term Resilience of Coastal Salt Marsh Systems" for \$742,900 was awarded to the Center for Remote Sensing & Spatial Analysis (CRSSA), the Center for Vector Biology (CVB) and the Jacques Cousteau National Estuarine Research Reserve (JCNERR) in collaboration with OMCC and Atlantic, Burlington, Monmouth, and Ocean county mosquito agencies. We will develop predictive models based on high resolution remote sensing physical information and patterns of distribution of salt marsh mosquitoes and fish obtained using environmental DNA (eDNA). The ultimate aim is to create improved tools for the management of salt marsh mosquitoes, especially in response to on-going sea level rise and approaches to improve coastal resilience. Follow this project on ResearchGate: https://www.researchgate.net/profile/Dina_Fonseca/projects

The Center is also launching a new initiative entitled Citizen Action Through Science (Citizen AcTS): <http://vectorbio.rutgers.edu/CitizenAcTS.htm>. The flagship project is the "University Park Community Mosquito Control" where residents have organized to remove mosquito habitat from their yards and deploy traps that kill egg laying female mosquitoes. Their "action" is urban mosquito control, which will remove nuisance and decrease risk of Zika and other mosquito-borne diseases. Other communities in MD, DC and NJ have started similar programs. Follow the project:

<https://www.researchgate.net/project/Helping-those-that-help-themselves>. And you may want to read a detailed review of the use of mass-trapping for urban *Aedes* control: Johnson BJ, Ritchie S, Fonseca DM 2017. The state of the art of lethal oviposition trap-based mass interventions for arboviral control insects 8,5. <http://www.mdpi.com/2075-4450/8/1/5>. The latest publications by members of CVB can be found at: <http://vectorbio.rutgers.edu/publications/>.

Dina Fonseca, Professor of Entomology is now the Director of the Center. Alvaro Toledo will be joining the Department of Entomology and the Center for Vector Biology in September as an assistant professor. Toledo is currently a research assistant professor at Stony Brook University, NY, researching on tick-borne pathogens such as Lyme disease and relapsing fever-causing *Borrelia* spp. In particular, he examines the dynamics and role of lipid rafts in the life cycle of *B. burgdorferi*. Brian Johnson that received his Ph.D from Rutgers in 2014 working with Dina Fonseca on "Proximal factors driving the local dynamics of West Nile virus transmission" is back from Australia where he worked with Scott Ritchie on dengue vector surveillance and control using *Wolbachia* infected *Ae. aegypti*. Now while still researching urban *Aedes*, he will examine patterns of distribution and abundance of salt marsh mosquitoes and alternatives to classical arbovirus surveillance.

Regional Reports



SOUTHEASTERN REGION

Rui-De Xue, regional director

As of June 12, 2017, Florida reported a total of 71 Zika virus cases 55 of which were travel-related, 4 locally acquired infections, and 12 undetermined. These included 48 pregnant women with laboratory-evidence.

Anastasia Mosquito Control District (AMCD), St. Augustine, Florida has been appointed as one of the ten AMCA/CDC Hub Hosts for training about Best Practice for Integrated Mosquito Management. Rui-De Xue and Christopher Bibb of AMCD were trained and certified as the master trainers at the AMCA headquarters, New Jersey. The hub host as a partner with Florida Department of Agricultural and Consumer Service (DACCS) held 7 regional Zika response workshops in Florida during April, training 206 mosquito control and public health professionals. The AMCD has also scheduled to have two sessions for the AMCA/CDC contract training and certification of trainers on July 2 -28 and August 24-25, 2017. Each training session will have maximum of 35 participants. These training will have free registration through AMCA and AMCD websites soon.

The AMCD, in collaboration with USDA/CMAVE, NE Regional Project committee, and Florida Mosquito Control Association (FMCA)'s Northeastern Regional Director (Peter Jiang), organized the 14th arbovirus surveillance and mosquito control workshop in St. Augustine, Florida, March 28-30, 2017. The workshop with 176 participants offered 20 continuing education units to Florida mosquito control and public health pest control license holders. In conjunction with the NE project annual meeting, the 15th arbovirus surveillance and mosquito control workshop will be held at the same place in St. Augustine, from March 27 to 29, 2018. Theodore Andreadis, Connecticut Agricultural Experiment Station, will give the keynote address on arboviruses of humans and animals in the USA, and Mustapha Debboun will give a guest presentation on their mosquito control program at Harris County, Houston, Texas.

The Florida Entomology Society (FES; www.flaentsoc.org) will hold its annual meeting with 100-year celebration at San Juan, Puerto Rico, July 16-21, 2017. The meeting will be in conjunction with the Caribbean Food Crops Society's annual meeting. The FES President, Rui-De Xue, has organized a symposium on Zika virus and other disease vector management, based on last year outbreaks of Zika virus in Puerto Rico and Florida.

Uli Bernier, Research Chemist, USDA/CMAVE, Gainesville, Florida [and SOVE Vice President] will be moving to Washington DC to become the USDA/ARS National Program Leader in early August. Congratulations and best wishes to Uli!

The International Forum for Surveillance and Control of Mosquitoes and Mosquito-borne Diseases, in collaboration with the Entomological Society of China, State Biosafety and Security Laboratory, and the Asian Society of Vector Ecology and Mosquito Control (www.asiansvmc.org), held its 5th meeting in Nanjing, China; the meeting was attended by 276 people from 12 countries, including 10 from Florida, USA.



Regional Reports



SOUTH CENTRAL USA

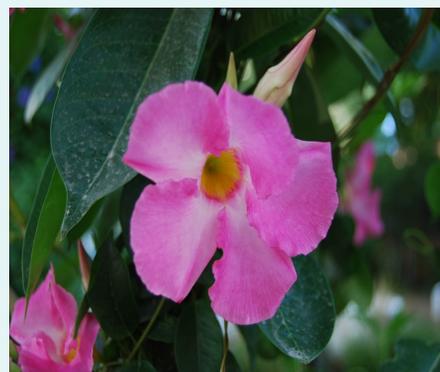
STEVE PRESLEY, regional director

sponse plans for Zika virus detection and control.

Steve Peper, a Ph.D. Candidate at Texas Tech University was awarded the Kelly Labell Travel Award (a nationally competitive award) sponsored by Bayer Corp.. The Kelly Labell Travel Award was established by Mr. and Mrs. Labell, in partnership with Bayer, to honor the life of their daughter Kelly who died from eastern equine encephalitis (EEE). Annually the award funds one student for an all-expenses-paid trip to the American Mosquito Control Association Annual Meeting. Steve was presented with the award from Kelly's parents as well as the president of AMCA.

If you are a member of SOVE and live in the South-central United States (i.e., Arkansas, Kansas, Louisiana, Oklahoma, and Texas) 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.

Have a great summer.



Summer is upon us once again, with much of the south-central U.S. having experienced a very mild winter resulting in arthropod and rodent populations thriving and raising public health concerns for increased risks of zoonoses and other vector-borne diseases. Much of the region has enjoyed sporadic spring rains and some flooding. However, the U.S. Drought Monitor indicates abnormally dry to moderate drought conditions in many areas of northern and southern Texas, southcentral Oklahoma, and northeastern Louisiana. Particularly in urban areas where residential lawn irrigation increases due to drought conditions, increases in potential mosquito vectors of Zika virus as well as other arboviruses may keep us all busy this summer.

Rick Duhrkopf, a professor of Biology at Baylor University for 33 years has recently retired. Rick's major area of research has focused on mosquito biology. During his time at Baylor, Rick has served as the South-central U.S. Regional Director for the Society for Vector Ecology, and as a Regional Director for the American Mosquito Control Association. Additionally, he has served as Treasurer and Spring Workshop Coordinator for the Texas Mosquito Control Association. Rick conveyed to me that "Although I am retiring from the faculty, I will still be active in TMCA and regional mosquito control." Please join me in congratulating Rick upon his retirement, and thanking him for his dedicated work towards improving public health and our professional societies.

Even though it has been nearly a year (10 months), I want to welcome Whitney Qualls to Texas. Whitney serves as an epidemiologist with the Texas Department of State Health Services in Austin, Texas. Her position is less formally known as the Texas state entomologist, and Whitney has done an outstanding job coordinating medical entomologists across Texas in our state's re-

Regional Reports



NORTHWESTSTERN USA

David Sullivan, regional director

In the last newsletter I stated “It looks as if winter is almost over in the Northwest, but one never knows for sure.” I was correct. It did warm up for a short period of time, but again the weather has turned cool with a fair amount of moisture still present throughout the NW Region. Snow pack has started to melt and many rivers are at or near flood stage.

In most of the territory the winter has been wetter than normal. The west coast has been hammered with 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.

There haven’t been many vector issues this winter, and it probably will not start appearing 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. As a result health officials warned people to avoid contact with fleas in prairie dog areas.

The Northwest Mosquito & Vector Control Association (NWMVCA) Spring workshop was held in Richland, WA 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 Asso-

ciation (MMVCA) held their Spring workshop at Great Falls, Montana on May 24, 2017.

The Idaho Mosquito and Vector Control Association spring workshops were held May 9 in Pocatello, and May 11 in Nampa. These meetings focus on larvaciding and adultciding techniques.

People:

Randy Gerard was appointed the new Executive Director of the Northwest Mosquito and Vector Control Association. Randy was the Oregon representative to the NWMVCA, and that position is now vacant.

Tom Haworth will retire this month from the Othelo MAD (Washington State) after more than 30 years as Manager.

Kenny Carver has joined UNIVAR’s staff. He previously worked for the Washington County Health Dept. on their mosquito control program.

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INDIAN SUBCONTINENT REGION

Ashwani Kumar, regional director

The Indian Subcontinent Region will hold its 1st conference on October 14-17, 2018 in Goa, India. As a famous tourists’ attraction on the southwestern coast of India, the city of Goa offers the most beautiful scenery, lots of fun, and exceptional cuisine.

After the meeting, some of the attendees will be going on a private tour to Taj Mahal, New Delhi, and Rajisthan (the state of forts). This will be a life-time opportunity to travel to this gold-triangle tourist area with familiar friends posing no language barrier.

We hope you can join the first meeting of the Indian Subcontinent SOVE region!
Ashwani Kumar

Regional Reports



EUROPEAN SOVE

Alex Chaskopoulou, regional director

As the incoming E-SOVE Director on the SOVE Board, I say “hello” to everyone from the hot, sunny Greece. Our research season has began and already all kinds of pesky, flying dipterans have made a strong comeback. Our research team at the European Biological Control Laboratory (ECBL) of USDA in Greece is fortunate to work on a variety of medically important pests including sand flies, mosquitoes, ticks, and, very recently, filth flies. The challenges of the research associated with the long, hot field days surveying insects and the operational hurdles from setting up control trials are easily and pleasantly endured due to the great team of people involved. This summer, we are so lucky to host in Greece several high quality researchers and professionals from all over the world. Most of these people I have met during the SOVE conferences – so before I begin to describe our summer’s adventures, allow me to thank the society from my heart for bringing all of us together, and thus making this summer’s work possible!

Our first guest Francis Schaffner (no need to introduce Francis) came to Greece under the auspices of the Vector Control Analysis project (VECA) launched by the European Center for Disease Prevention and Control (ECDC). The VECA project aims to increase our knowledge on West Nile virus (WNV) ecology and control. This project also aims at optimizing resource allocation and improving

cost-effectiveness of vector control against WNV in Europe. The EBCL Greece is partnering with ECDC in pilot studies to evaluate the effectiveness of commonly used vector control techniques against WNV vectors. Similar pilot studies are also carried out in Armenia and Italy. During his stay in Greece, Francis participated in organizing the field trials and joined us in survey trips targeting mosquitoes breeding in rice fields and other nearby sites. When Francis is around no mosquitoes remain undiscovered – not even tree holes were good enough hiding places for the poor *Ae. geniculatus* larvae (Fig.1). We are also very happy to host Laurence Marama (ECDC Emerging and Vector-borne Diseases Programme) who will join us in our field endeavours under the VECA project.

Our second guest travelled across the Atlantic from Gainesville, Florida to Thessaloniki, Greece, and despite the long and tiring trip he jumped right into the field. Jerry Hogsette, - Lead scientist in the Mosquito & Fly Unit at USDA CMAVE Florida, came to Greece to perform studies on the seasonality and management of filth flies associated with cattle farms. During his stay we tested a variety of novel trapping methodologies against the common house fly (*Musca domestica*) and the stable fly (*Stomoxys calcitrans*)(Fig 2).

.....cont'd as E-SOVE on p. 6

*Regional Reports**E-SOVE p. 5 cont'd.....*

Some of these technologies were used for the first time in Europe and were very successful at collecting high numbers of the two targeted species. These methodologies may have potential to be used for controlling wild fly populations and thus reducing the nuisance and distress caused to domesticated animals. I think we almost persuaded Jerry to move to Greece...it didn't work this time but next summer when he returns, we will make sure that his Greek mentality prevails!

Very soon we are waiting for the sand fly group under the auspices of the VectorNet Project - Bulent Alten, Petr Volf and team, and Vladimir Ivovic to join us for surveying sand fly populations across the Peloponnese region of south Greece. As you already know VectorNet is a joint initiative of the European Food Safety Authority (EFSA) and the ECDC, which started in June 2014. The project supports the collection of data on vectors and pathogens in vectors, related to both animal and human health. The information created by this project will not only help to update the VectorNet distribution maps but will hopefully also enhance the collaboration between teams and the initiation of vector monitoring campaigns across Europe.

I was very fortunate to attend the 6th World Congress on Leishmaniasis (WorldLeish 6) last May in beautiful and historic Toledo, where I co-chaired the session on New Vector Control Measures with Dia Elnaiem. WorldLeish 6 was organized by the Instituto de Salud Carlos III (ISCIII), Spain and Drugs for Neglected Diseases initiative (DNDi), Switzerland. The Organizing Committee comprised five members of the two organizing institutions, with Jorge Alvar (DNDi) and Javier Moreno (ISCIII) as chair and co-chair of the congress, respectively. The meeting was very well attended with more than 1400 experts representing over 70 countries. The scientific program was composed of 36 parallel sessions, 4 plenary sessions, 10 symposia, 27 oral communication sessions and 4 poster sessions. In addition to the excellent scientific program other activities were organized in parallel including 1) a photography contest and exhibition aiming to bring greater awareness of leishmaniasis to the general public and 2) a special session at the Spanish Royal Academy of Medicine on "Violence and Leishmaniasis" addressing the epidemics in South Sudan, Middle East, and Syrian refugee camps in the context of war and civil unrest.

A new exciting research tool - MosKeyTool is an interactive identification key for mosquito species (4th stage larvae and female specimens) of the whole Euro-Mediterranean area. MosKeyTool is intended to help non-entomologists and expert users for identifying the species of a mosquito specimen. This comprehensive basis covers 128 mosquito species, is a user-friendly tool, freely downloadable and can be easily installed on your computer. The MosKeyTool was authored by Filiz Gunay and Vincent Robert and was developed by MediLabSecure. Next, Filiz and Vincent will be in Tunisia to present the MosKeyTool in the MediLabSecure regional meeting. For more information go to: www.medilabsecure.com/moskeytool.

Have a great season!

Alex

President's messagecont'd from p 2.

As a member of that demographic (more specifically, grumpy old white guys who study mosquitoes), I took some offense, but it also made me think. My first reaction was to say that the individual was mistaken because SOVE members are diverse and we certainly encourage participants who are working on other vector groups. However, I reviewed the most recent program and found that about 80% of the presentations were mosquito-centric and that over half of all presentations emphasized control or resistance issues. Perhaps this was anomalous because of the recent Zika emergency, or perhaps it just reflects the roots of SOVE. In truth, the program was very interesting to me, but a potential new member was unimpressed and will likely not attend future meetings. A sample size of one is hardly reason for alarm, but we should strongly consider finding out more from all student attendees regarding how they view SOVE and if becoming a long-term member is important to them. We all recognize competi-

tion and overlap with AMCA, Ent Soc, and Trop Med, and I think we also realize that providing financial support alone will not sway a student's decisions beyond one or two meetings. I'm not sure we can improve much upon the model of a fun, intimate venue that characterizes our annual meetings, but perhaps if we try to include more symposia on broad-level disease ecology and fundamental (including non-mosquito) vector biology, we'd attract a younger membership base as my demographic fades slowly into the sunset.

Speaking of sunsets, I'd be happy to discuss any of the above (and more) with you on a Mallorca beach this fall - preferably with a nice Spanish wine. I'm told Major Dhillon will buy the first round. I'm looking forward to seeing many of you there.

Have a great summer,

Mike



Fig. 1. Francis is looking for some tree-hole mosquitoes, but watch out it could be a risky job! (see E-SOVE report, p. 5)



Fig. 2. Haven't seen Jerry so happy in looking for fly maggots in a manure pile in Thessaloniki, Greece. (see E-SOVE report, p. 5)

Please mark your calendar
the forthcoming

7th Congress of SOVE

October 1-6, 2017

Palma, Mallorca Island

Spain

Below is a Tentative Congress Program

Sunday-October 1, 2017

12:00-6:00 PM *Registration*

4:00-5:30 PM *Board Meeting*

Possibility of a symposium

Monday-October 2, 2017

8:00 *Opening of the Congress*-Norbert Becker

Scientific Program/Moderator-Bulent Alten

Welcome Address-Miguel Angel Miranda Chueca

Awards-Bulent Alten

Presidential Address-Michael Kaufman

Announcements-Major Dhillon, Executive Director

9:20-10:00 *Keynote Speaker*-Willy Wint

10:00-10:30 *Break*

10:30-12:30 *Symposium 1*-Molecular Strategies for the Control/Eradication of Mosquito-borne Diseases

Chairs: Greg Lanzaro and Andrea Crisanti

12:30-1:30 *Lunch*

1:30-3:10 *Symposium 2*-Old diseases, new diseases and new technology

Chairs: Ben Beard and Paulo Pimenta

3:10-3:40 *Break*

3:40-6:00 *Symposium 3*-Insecticides and Repellents

Chairs: Mustapha Debboun and Ulrich Bernier

6:00-7:00 *Symposium 4*-Role of Arthropod Vector Saliva in the Transmission of Human Pathogens

Chairs: Nathalie Boulanger and Adriana Costero-Saint Denis

Program cont'd on p. 9

CONGRESS PROGRAM cont'd from p

Tuesday-October 3, 2017

8:30-9:10 *Keynote Speaker*-Koray Ergunay

9:10-11:40 *Symposium 5*-Integrated Vector Management

Chairs: Bob Novak and Norbert Becker

11:40-12:10 *Break*

12:10-1:50 *Symposium 6*-Ticks

Chairs: Marieta Braks and Jolyon Medlock

1:50-2:50 *Lunch*

2:50-3:50 *Symposium 7*-Kiss of Death: Triatomines and *Trypanosoma cruzi*

Chairs: Melissa Nolan and Silvia Moriana

3:50-4:20 *Break*

4:20-6:00 *Symposium 8*-Malaria: Can it be eradicated in the next 20 Years?

Chairs: Dan Strickman and Carlos Aranda

Wednesday-October 4, 2017

Field Ecology Day- No Symposium

Thursday-October 5, 2017

8:30-10:00 *Symposium 9*-Student Presentations

Chair: Casey Parker

10:00-10:15 *Break*

10:15-11:45 *Symposium 10*-Student Presentations

Chairs: Gizem Oguz and Carlos Barceló

11:45-12:00 *Break*

12:00-1:00 *Symposium 11*-Taxonomy and phylogeny of mosquitoes

Chairs: Francis Schaffner and Yvonne-Marie Linton

1:00-2:00 *Lunch*

2:00-4:00 *Symposium 12*-Vector Projects in the World

Chair: Veerle Versteirt

4:00-4:15 *Break*

4:15-6:15 *Symposium 13*-Novel Approaches towards species identification of parasitic arthropods

Chairs: Vit Dvorak and Claudia Paredes Esquivel

TBD *Symposium 14*- Brokerage Event

Chair: Miguel M. Cheuca

Friday-October 6, 2017

8:30-10:00 *Symposium 15*-Vector control strategies against mosquitoes and biting flies: Attract and kill technologies, barrier treatments and space sprays

Chairs: Dan Kline and Alexandra Chaskopoulou

10:00-10:30 *Break*

10:30-12:00 *Symposium 16*-Focus on Sand flies-Saliva, microbiome and vector competence

Chairs: Fabiano Oliviera and Petr Volf

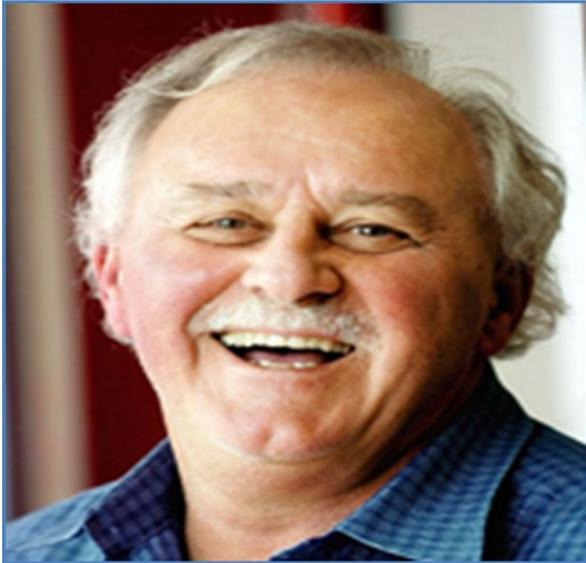
12:00-12:30 *Break*

12:30-2:15 *Symposium 17*-Global Research on Culicoides Biology and Control

Chairs: Miguel Angel Miranda and Alec Gerry

END

OBITUARY



BRIAN H. KAY

1944-2017

by

Richard Russel

Brian had a long and productive career at the Queensland Institute of Medical Research (more recently known as QIMR Berghofer) in Brisbane, Australia. He started there in 1963 as a 19-year old cadet, completing a BSc (Hons) degree part-time (1970) and a PhD (1978) at the University of Queensland. He headed the Entomology Laboratory (later called Mosquito Control Laboratory) from 1970, and in his later years he became part of the Institute's senior executive team. He retired in 2014 after 51 years at the same Institute.

He began in the entomology laboratory under Harry Standfast, learning his entomology field craft with Harry and Alan Dyce from CSIRO, and his virus training with Ralph Doherty's arbovirology team. The early years of Brian's research career were spent primarily investigating local arboviruses. This involved field investigations into ecology and laboratory studies on vector competence for viruses such as Murray Valley encephalitis, Ross River and others. Brian continued working with these and other arboviruses, including dengue viruses, throughout his long career. Much of what we now understand about the role of mosquito vectors and vertebrate hosts for these viruses that affect human health in Australia, particularly in Queensland, we owe to the groundbreaking work of Brian and his students. However, beyond his virus work, Brian was interested in mosquito control, and this led to long-term relationships with local govern-

ments in Southeast Queensland and their control programs against the saltmarsh mosquito *Aedes vigilax* (Skuse). He first had involvement with improving pesticide applications, including early trials of aerial application of larvicides on the Gold Coast in the 1970s. Later he worked with Pat Dale and others from the 1980s to develop the environmentally acceptable practice of runnelling, a network of shallow spoon shaped drains on saltmarshes to enable fish access and water egress without damaging the marsh, leading to reductions in pest mosquito populations.

When dengue resumed almost annual activity in Queensland in the 1990s, Brian undertook projects, with students and associates, on developing strategies for improved surveillance and control of *Ae. aegypti* (L.). He focused on identifying key places and habitats, particularly subterranean sites, and how best to manage them through source reduction or biological control. This led to what he considered his most important work, using copepods (*Mesocyclops*) to prey on dengue mosquito larvae in container habitats, a methodology started in French Polynesia in the 1980s with scientists from Institute Pasteur, but brought to Queensland and extended to places in Southeast Asia and Brazil. It worked best in Vietnam, with its major dengue problem and where governmental support was available during the 1990s, and there it came to fruition in the early 2000s, culminating in what Brian saw as his 'crowning glory': the freeing of very large numbers of people in northern and central Vietnam from the risk of dengue via sustainable and environmentally friendly community-based programs using a combination of environmental sanitation and distribution of home-grown copepods. In the early 2000s, Brian was also integrally involved in the Gates Foundation funded 'Eliminate Dengue' program, led by Scott O'Neill, which was designed to have *Wolbachia* bacteria establish in and debilitate dengue mosquito populations through life shortening and virus blocking characteristics.

.....Kay's obituary cont'd p. 12

SOVE GEOGRAPHIC MEMBERSHIP REGIONS

Northeastern United States

-includes the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Washington DC, and West Virginia. Canada-provinces of Newfoundland (Labrador), New Brunswick, Nova Scotia, and Quebec.

Southeastern United States

-includes the states of Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.

North Central United States

-includes the states of Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Ohio, and Wisconsin. Canada-provinces of Manitoba, Ontario, and Northern Territory.

South Central United States

-includes the states of Arkansas, Kansas, Louisiana, Oklahoma, and Texas.

Northwestern United States

-includes the states of Alaska, Colorado, Idaho, Montana, Oregon, Utah, Washington, and Wyoming. Canada-provinces of Alberta, British Columbia, and Saskatchewan.

Southwestern United States

-includes the states of Arizona, California, Hawaii, Nevada, and New Mexico.

Europe

Includes all countries encompassed by that continent.

Latin America

-includes all countries within Central and South America.

Asia

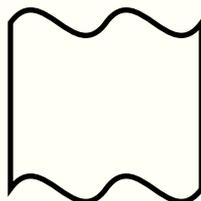
-includes China and other nearby countries.

Indian Subcontinent

-includes India and adjacent countries excluding countries in the Asian Region

Australia (developing) ?

Africa (developing) ?



For Your Calendar

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

No listing this quarter

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](#)

[Email: acostero@niaid.nih.gov](mailto:acostero@niaid.nih.gov)

Obituary from p. 10 cont'd...

In 1998, the Australian southern saltmarsh pest and vector mosquito *Ae. camptorhynchus* (Thomson) was detected in New Zealand and subsequently became widely established. Brian's expert advice was instrumental in initiating and maintain-

ing the uniquely successful government-based program that eliminated the species, with eradication declared in 2010.

Brian was President of the Mosquito and Arbovirus Research Committee in Queensland for 21 years until 2013, and his laboratory had the World Health Organization Collaborating Centre status from 1986. Throughout his career, Brian had many attachments to the WHO as a consultant to various countries and as a member of advisory committees, particularly with regard to environmental management of mosquito populations and dengue vector control.

He was a very productive researcher, had a very impressive record in attracting grant funds, a list of almost 300 publications, supervised many postgraduates and was responsible for developing the careers of many researchers. Brian received a number of scientific credits and awards (including a Churchill Fellowship for study travel in 1978, an Ivanovsky Centenary Medallion in 1999 for his virology work, and Life Membership of the Mosquito Control Association of Australia in 2012), but he was particularly proud of his Member of the Order of Australia Award in 2005 and Fellowship of the Australian Academy of Science in 2006.

Brian was a full-on character who enjoyed life and work, and lived them to the fullest; close colleagues will readily recall many convivial dinners with good food and wine in Brian's company. As he prepared for retirement, he stepped back from full-time to work 3 days per week to spend more time with his partner Jane (and the fishing that he so enjoyed).

Sadly, shortly after attending the 12th Mosquito Control Association of Australia and Arbovirus Research in Australia Symposium held in September 2016, Brian was diagnosed with a malignancy that developed rapidly, and he passed away on April 1, 2017. There can be no doubt he made a major contribution to medical entomology both in Australia and abroad, leaving a great legacy in arbovirology, and mosquito ecology and control.





Society for Vector Ecology

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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 September/October.

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