

SIMON M. MURIU CURRICULUM VITAE

PERSONAL DATA:

Name: Simon Mwangi Muriu
Address: P. O. Box 31208-00600, Nairobi
E-mail: S.muriu@gmail.com
Cell phone: +254-722-476 117
Date of Birth: 1976
Marital Status: Married
Languages spoken: English, Kiswahili and Mother tongue.

CAREER OBJECTIVE:

To work for an institution engaged in training and research activities whilst utilizing the strength of my academic background and research experience to advance the goals and aspiration of the institution.

WORK EXPERIENCE:

Dec 2015- Current: Senior Lecturer

Department of Biological Sciences,
School of Pure Applied Sciences
Pwani University,
P.O. Box 195-80108, Kilifi.

Jan 2013- Nov 2015: Lecturer

Department of Biological Sciences,
School of Pure Applied Sciences
Pwani University, P.O. Box 195-80108, Kilifi.

August 2009- 2012: Research fellow

Department of Zoology
University of Oxford, United Kingdom

June 2006-July 2009: Research Officer

Directorate of Research Management and Development (DRMD)
National Council of Science and Technology (NCST)
P.O. Box 30568, Utalii House 9th Floor, Nairobi, Kenya

March 2005-2008: Research Officer and Field Coordinator

Illinois State University NIH Project tenable at
International Centre of Insect Physiology and Ecology (ICIPE)
Human Health Division, Mwea Field Station
Malaria Program in Mwea Rice Irrigation Scheme

Responsibilities:

Supervision of field implementation of Malaria control programs funded by National Institute of Health (NIH) and System-wide Initiative on Malaria and Agriculture (SIMA)
Co-ordination and management of fieldwork activities and field staffs,
Community training and mobilization for Malaria vector control
Dissemination and interpretation of project results to stake holders

July 2002- June 2004: Research Assistant

Mosquito Larval Ecology project-Michigan State University and Centers
Disease Control and prevention (CDC/KEMRI-Programme)
P.O. Box 1578, Kisumu

Aug - Nov 2004:

Molecular laboratory Research assistant
Center for Biotechnology Research and Development
Kenya Medical Research Institute (KEMRI),
P. O. Box 30197-00100, Nairobi.

Other training:

2010-

Molecular Biology and Immunological test procedures
Project Management and Leadership Skills at Kenya Institute of Management
(KIM)

2009

Gender Mainstreaming, Drug and substance abuse management – National Council
of Science and Technology (NCST)

2009

Occupational Health and safety- Ministry of Higher education Science and
technology (MoHEST) and at KEMRI

2008

Effective Supervision and Organization Skills- MoHEST

EDUCATIONAL BACKGROUND

August 2009-2012:

Post-Doctoral Research Fellow
Oxford University- KEMRI/Wellocome Trust Programme
P.O. Box 230 – 80108, Kilifi, Kenya

Project:

Field manipulations of larval mosquito populations

2005-2009:

Doctor of Philosophy (PhD)

Field of study:

Medical Parasitology/ Entomology
School of Biological Sciences, University of Nairobi.

Research Study topic:

*Malaria Vector Bionomics and the Role of Microbial Larvicides in
Malaria vector Management in a Riceland Agro-ecosystem.*

Study Programme:

African Region Postgraduate Program in Insect Science (ARPPIS)
Programme
Human Health Division,
International Centre of Insect Physiology and Ecology (ICIPE)
Nairobi, Kenya

Scholarship Awarded:

German Academic Exchange Service (DAAD) Scholarship
ARPPIS scholar – (2005 -2008)

October 2001-2004:

UNIVERSITY OF NAIROBI
College of Biological and Physical Sciences

Degree course:

Masters of Science (Msc) in Applied Parasitology

Academic Project:

*The Population dynamics of Anopheles gambiae immature stages and
their interaction with other aquatic fauna in Western Kenya*

Scholarship awarded:

German Academic Exchange Services Scholarship (DAAD -2001)

September 1996-2000:

UNIVERSITY OF NAIROBI

Degree course:

Bachelor of Science (Bsc) Zoology

Degree Classification:

First Class Honours.

Academic Project: *The survey of Culicoides (Diptera: Ceratopogonidae) in Chiromo campus and its environs.*

Jan 1990 –1994: **GIKANDU SECONDARY SCHOOL,**
Kenya Certificate of Secondary Education (K.C.S.E)
P.O. Box 718, Murang'a

Publications:

1. **Muriu, S.M.**, Coulson,T., Mbogo, C.M., and H.C. J. Godfray (2013). Larval density dependence in *Anopheles gambiae*, the major African vector of malaria. *Journal of Animal Ecology*, 82:166-74.
2. Mwangangi, J.M., Muturi, E.J., **Muriu, S.M.**, Nzovu, J., Midega, J.T. and Mbogo, C (2013): The role of *Anopheles arabiensis* and *Anopheles coustani* in indoor and outdoor malaria transmission in Taveta District, Kenya. *Parasite and Vectors*, 6:114
3. Mwangangi JM, Shililu J, Muturi EJ, **Muriu S**, Jacob B, Kabiru EW, Mbogo CM, Githure J, Novak R.J. (2010): *Anopheles* larval abundance and diversity in three rice agro-village complexes Mwea irrigation scheme, central Kenya. *Malaria Journal* , 9:228.
4. Muturi EJ, Kamau L, Jacob BG, **Muriu S**, Mbogo CM, Shililu J, Githure J, Novak RJ. (2009). Spatial distribution, blood feeding pattern and role of *Anopheles funestus* complex in malaria transmission in central Kenya. *Parasitology research*, 105:1041-6
5. **Muriu S.M.** Muturi E. J., Shililu J.I. Mbogo C.M. Mwangangi J. M. Jacob B.G. Mukabana R.W. Irungu L.W. Githure J.I. Novak R.J. (2008): Host choice and multiple blood feeding behavior of malaria vectors and other anophelines in Mwea rice irrigation scheme, Kenya. *Malaria journal*, 7:43
6. Muturi EJ, **Muriu S**, Shililu J, Mwangangi JM, Jacob BG, Mbogo C, Githure J, Novak RJ. (2008). Blood-feeding patterns of *Culex quinquefasciatus* and other culicines and implications for disease transmission in Mwea rice scheme, Kenya. *Parasitology research*, 102:1329-35
7. Mwangangi JM, Muturi EJ, Shililu JI, **Muriu S**, Jacob B, Kabiru EW, Mbogo CM, Githure JI, Novak RJ. Contribution of different aquatic habitats to adult *Anopheles arabiensis* and *Culex quinquefasciatus* (Diptera: Culicidae) production in a rice agroecosystem in Mwea, Kenya. *Journal of Vector Ecology* 2008, 33 (1).
8. Muturi.E.J., **Muriu S.**, Shililu J., Mwangangi J., Jacob B.G., Mbogo C., Githure J., and Novak R.J.: Effect of Rice Cultivation on Malaria Transmission in Central Kenya. *Am. J. Trop. Med. Hyg.*, 78(2), 2008, pp. 270-275
9. Mwangangi JM, Muturi EJ, Shililu JI, **Muriu S**, Jacob B, Kabiru EW, Mbogo CM, Githure JI, Novak RJ. Environmental covariates of *Anopheles arabiensis* in a rice agroecosystem in Mwea, Central Kenya. *J Am Mosq Control Assoc.* 2007 Dec 23(4):371-7.
10. Muturi EJ, Mwangangi J, Shililu J, **Muriu S**, Jacob B, Mbogo CM, John G, Novak R. Evaluation of four sampling techniques for surveillance of *Culex quinquefasciatus* (Diptera: Culicidae) and other mosquitoes in African rice agroecosystems. *Journal of Medical Entomology.* 2007, 44(3):503-8.
11. Jacob BG, Muturi EJ, Mwangangi JM, Funes JE, Caamano EX, **Muriu SM**, Shililu JI, Githure JI, Novak RJ. Remote and field level quantification of vegetation covariates for malaria mapping in three rice agro-village complexes in Central Kenya. *International Journal of Health Geography.* 2007, 6(1):21

12. Muturi, E.J., Mwangangi J., Shililu J., **Muriu S.**, Jacob B., Kabiru E., Gu W., Mbogo C., Githure J., Novak R: Mosquito Species Succession and Physicochemical Factors Affecting Their Abundance in Rice Fields in Mwea, Kenya. *Journal of Medical Entomology*, 2007 Vol 44 (2): 336–344
13. Mwangangi JM, Muturi EJ, Shililu J, **Muriu SM**, Jacob B, Kabiru EW, Mbogo CM, Githure J, Novak R. Survival of immature *Anopheles arabiensis* (Diptera: Culicidae) in aquatic habitats in Mwea rice irrigation scheme, central Kenya. *Malaria Journal* 2006, 24 (5): 114.
14. Jacob BG, Shililu J, Muturi EJ, Mwangangi JM, **Muriu SM**, Funes J, Githure J, Regens JL, Novak RJ. Spatially targeting *Culex quinquefasciatus* aquatic habitats on modified land cover for implementing an Integrated Vector Management (IVM) program in three villages within the Mwea Rice Scheme, Kenya. *International Journal of Health Geography*. 2006 9 (5): 18.

Current Manuscripts Prepared

1. Benyl M. Ondeto^{1, 2*}, Christopher Nyundo¹, Luna Kamau³, Simon M. **Muriu**⁴, Joseph M. Mwangangi¹, Kiambo Njagi⁵, Evan M. Mathenge⁶, Horace Ochanda², Charles M. Mbogo: Current Status of Insecticide Resistance of Malaria Vectors In Kenya. (**Submitted-Parasite & vectors Journal**)
2. Pauline Winnie Orondo^{1,2*}, Luna Kamau², Steven Ger Nyanjom¹, Damaris Matoke-Muhia², Venny Nyambati¹, Simon M. **Muriu**³, Eric Ochomo⁴ and Charles M. Mbogo^{5,6}: *Mechanisms of insecticide resistance in malaria vectors in Central and Coastal Kenya*. (**Submitted-PlosOne Journal**)
3. **Simon M. Muriu**^{*1, 2}, Tim N. Coulson³, Fredrick Ibinda¹, Joseph Mwangangi¹, Charles M. Mbogo¹, And H. Charles J. Godfray²: *Spatial Connectivity and Distribution Patterns of Malaria Vectors along the Kenyan Coast*
4. Miriam W. Karuitha¹, **Simon M. Muriu**² Joseph G. Nzovu¹, Joseph M. Mwangangi¹, Charles M. Mbogo: *Spatial distribution of Culicine larval habitats and species diversity in Mombasa Island and its adjacent mainland*

Selected Conference papers Presentations:

February 2015: **KEMRI Annual Scientific and Health (KASH) Conference**

Paper: Karuitha Miriam, Nzovu Joseph, **Muriu Simon**, Mwangangi Joseph, and Charles Mbogo: *Mosquito species diversity and distribution within Mombasa Island and its adjacent mainland*

October 2014: **Pan-African Mosquito Control Association Annual Conference**

Papers Presented:

1. **Muriu Simon**, Coulson Tim, Mwangangi Joseph, Mbogo Charles and Charles Godfray: *Spatial connectivity and distribution patterns of malaria vectors along the Kenyan coast*
2. Karuitha Miriam, **Muriu Simon**, Muturi Martha, Mwangangi Joseph, Mburu David and Charles Mbogo: *Efficacy and residual properties of Aloe secundiflora*

February 2013: KEMRI Annual Scientific and Health (KASH) Conference, Nairobi, Kenya

Paper: **Muriu, S.M.**, Rhamadhan, S.S., Mwangangi, J.M., Mbogo, C.M: *The efficacy and residual properties of crude botanical extracts of local plants against malaria vectors along the Kenyan Coast.*

August 2012: International Congress of Entomology (ICE), Daeugu, South Korea

Paper: **Muriu, S.M.**, Coulson, T., Mbogo, C.M., and H.C. J. Godfray. *Role of density-dependence processes on malaria vector control strategies in Kenya.*

February 2012: KEMRI Annual Scientific and Health (KASH) Conference, Nairobi, Kenya

Paper: **Muriu, Simon**, Tim Coulson, Charles Mbogo and H. Charles Godfray: *Implications of Larval Density-Dependence Processes on Malaria Vector Control Strategies in Kenya*

July 2008: International Congress of Entomology (ICE) Conference, Durban, S.A.

Paper: **Muriu, S.M.**, Mwangangi, J.M., Muturi, E.J., Irungu, L.W., Jacob, B., Shililu, J.I., Githure, J.I., and Novak, R.J., *Microbial larviciding in irrigated rice agro-ecosystems.*

Grant Applications and Awards :

Project title: *Bacterial Superinfection and immunodominant cytokines in tungiasis infections in Rojorojo, Tezo, Gede and Dabaso villages, Kilifi North constituency in Kilifi County, Kenya. (Successful-2016)*

Role: **Principal investigator (PI)**

Funder: Pwani University Research Board

Project title: *Up-scaling of the Adaptive Integrated Vector Management (IVM) to Kirinyaga County for sustainable malaria and schistosomiasis control (Successful-2016)*

Role: **Co-Principal investigator**

Funder: Kenya Medical Research Institute (**KEMRI**)

Project title: *Longitudinal Study of Vector Behavior in Areas of Expanding Vector Control Interventions in Kenya (Successful-2013)*

Funding Agency: World health Organization (WHO)

Principal investigator: Prof. Charles Mbogo

Role: **Co-PI**

Project title: *Field Evaluation of the Interspecific Competition between Sibling Species Anopheles gambiae s.s. and Anopheles arabiensis Larval Population (Unsuccessful- 2012)*

Funding agency: Wellcome Trust (Grant No.062056) - Training Grant

Role: **Principal Investigator**

Sponsors and Co-PI: Prof. Charles Mbogo (KEMRI), Prof. Charles Godfray (Oxford University), Prof. Tim Coulson (Imperial College London)

Project title: *Field evaluation of the efficacy and effectiveness of crude botanical extracts of Indigenous plants against mosquitoes along the Kenyan Coast.*

Funding Agency: KEMRI Internal Grant (**Unsuccessful-2011**)

Role: Principal Investigator

Project Title: *Field manipulations of larval mosquito populations- Successful*
Funding Agency: Wellcome Trust (Grant No.08608)
Investigators: Charles Godfray (PI), Tim Coulson (Co-PI) Charles Mbogo (Co-PI).
Role: Post-Doctoral Research Fellow

Project Title: *Microbial control of immature Anopheles mosquitoes*
Funding Agency: National Institute of Health
Principal Investigator: Prof. Robert Novak
Role: Field study Coordinator and PhD Scholar

Research Supervision duties:

PhD Student: **Samuel K. Charo**

Thesis Project: The impact of targeted application long-lasting microbial larvicides in malaria transmission in Western Kenya highlands. (Ongoing)

University/Department : **Department of Biological Sciences, Pwani University**

MSc. Student: **Jacob Mwangi Wangari (Pwani University)**

Thesis Topic: Microbial super-infections in tungiasis amongst residents of Kilifi, Kenya (Ongoing)

MSc. Student: **Prophet Ingosi Mulega (Pwani University)**

Thesis Research Topic: Understanding residual malaria transmission for sustainable control in Kilifi county. (Ongoing)

Masters in Public Health Student: **Jonathan Karisa (Pwani University)**

Thesis Research Topic: Ecology of *Culex* and *Aedes* Mosquitoes and Transmission Dynamics of Arboviruses in the Coast Region Ecosystem. (Ongoing)

Masters in Public Health Student: **Albert Njeru (Pwani University)**

Thesis Research Topic: Impacts of Concomitant Schistosomiasis and soil transmitted helminthes on Anaemia Among Children in Selected Hot Spots in Kwale County, Kenya. (Ongoing)

Msc. Student: **Mr. Abdullah S. Hemed**

Thesis Research Topic: *Pattern of host seeking and oviposition preferences of Malaria vectors in Kilifi county, coastal Kenya (Successfully completed-2012)*

MSc. Student: **Mramba Emmanuel (Pwani University)**

Thesis Research Topic: Prevalence and parasite load of Tungiasis in Kilifi county

MSc. Student: **Isaiah Karisa Mwangala (Pwani University)**

Thesis Research Topic: Vector borne diseases among small-scale livestock farmers in Kilifi

KEMRI-Wellcome Trust Interns supervision:

2012: Intern Student **Mr. Salim Ramadhan** (Just completed Msc degree in Turkey)

Research Topic: *Efficacy and Persistence of Biolarvicides in Malaria Vector Control*

2011: Intern Student **Mr. Boniface Wilunda** (Currently MSc. Student, London School of tropical Medicine)

Research Topic: *Effect of Habitat Limitations in Regulating Oviposition site selection by Anopheles gambiae Mosquitoes under simulated field environment*

Undergraduate Research Students Supervision:

2015/2016 Academic Year: Sospeter Magube

Habitat and species diversity of arboviral mosquito vectors in Pwani University and its environs (Successfully completed)

Student 2: Ramadhan Kadingo

Evaluation of trichomoniasis infection among women of reproductive age in Kilifi (Successfully completed)

2014/2015 Year: Steven Ngochi (Pwani University)

Topic: *Malaria transmission and bednet usage among Pwani University Student Community (Successfully completed)*

Student 2: Stefica Kerubo (Pwani University)

Topic: *Microbial larviciding using Pseudomonas fluorescens isolates against malaria vectors in Kenya (Successfully completed)*

2013/2014 Year: Miriam Karuitha (Pwani University)

Topic: *Efficacy and Residual Properties of Aloe secundiflora Crude Extract On Anopheles gambiae Larval Population (Successfully completed)*

2012/2013 Year: Linnet Onyango (Pwani University)

Topic: *Malaria and geohelminthic co-infections among pregnant women in manyatta slums kisumu city (Successfully completed)*

201/02011 Year: Pauline Orondo (University of Nairobi)

Topic: *Comparative effectiveness of inorganic vegetables oils and microbial larvicides in the control of malaria vectors in Kenya (Successfully completed)*

Other duties/responsibilities:

Conference and workshop/seminar organizer

Feb 2015: Pan-African Mosquito Control Association Symposium (PAMCA) at **KASH** conference, Nairobi, Kenya

Role: Convener and Symposium Chair

2014: 1st Annual Pan-African Mosquito Control Organization Conference in Nairobi, Kenya

Role : Local Organizing Committee Secretary

2013: Symposium on mosquito borne-diseases in Africa (KEMRI- Nairobi)

Role: Organizing committee member and Panelist

2013: Pan-African Mosquito Control Association Official Launch Symposium-(Durban, S. Africa)

Role: Membership Recruitment Committee Chair

2013: Malaria vectors management for Somalia public health officers- KEMRI- Kilifi

Role: Training workshop facilitator

University Administrative Responsibilities:

Acting Chairman: Department of Biological Sciences Pwani University

Chairperson: Departmental Postgraduate Committee

Member:

1. Pwani University Strategic Plan Committee
2. School and Departmental Curriculum Development committee

3. Pwani University Bioscience Research Centre

Prizes: 1st Prize Winner of the ICIPE Governing Council Research Award for the best Peer reviewed Publication (2008)

German academic exchange service (DAAD) incountry scholarship award for masters degree (2001-2003)

German academic exchange service (DAAD) PhD scholarship award (2005-2008)

Professional membership:

Pan-African Mosquito Control Association (PAMCA)- **In charge of Membership Recruitment**

Hobbies and Interests:

Reading,

Wildlife field excursions,

Swimming

Referees:

1. Prof. Charles M. Mbogo

Chief Scientist

KEMRI- CMGR, Coast

P.O. Box 230-80108, Kilifi, Kenya

Email : Cmbogo@kemri-wellcome.org

2. Professor Lucy W. Irungu

Deputy Vice Chancellor (Research, Production and Extension)

University of Nairobi

P. O. Box 30197-00100, Nairobi

Email; Lirungu@uonbi.ac.ke

3. Dr. Salome M. Guchu

Deputy Assistant Director

Department of Research Development and Management (DRDM)

National Commission of Science, Technology and Innovation (NACOSTI)

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