

## CURRICULUM VITAE

### **DR. GEORGE O. ONG'AMO**

School of Biological Sciences  
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#### **EDUCATION**

**1994–1998:** Kenyatta University, Nairobi; Kenya.

Undergraduate studies: B. Environmental Studies (Science); Second Class Honors upper Division

**2002–2004:** Kenyatta University, Nairobi; Kenya.

Postgraduate studies: MSc. Zoology (Agricultural Entomology)

**2005–2008:** Kenyatta University, Nairobi; Kenya

Postgraduate studies: Ph.D. Applied Entomology

Title of study: Diversity, Ecology and population dynamics of lepidopteran stem borers in Kenya.

#### **PROFESSIONAL EXPERIENCE**

**May, 2011 – to date:**

Lecturer – School of Biological Sciences, University of Nairobi. As a lecturer, I offer courses in Entomology, Research methodology and Experimental design & Biostatistics to both undergraduate and post graduate students. In addition to teaching I am involved in student mentorship and supervision of their respective research projects. Currently, I am supervising four PhD and six MSc students in diverse entomology fields.

##### **Head of Insect Science Thematic group:**

As a lecturer in the school, I was appointed to Head Insect Science thematic group. This thematic area is one of the main strengths of the School of Biological Sciences and with six full professors; the area has a long history of studies in Entomology. Through teaching and research, the team focuses on arthropods with emphasis on those with known ecological, agricultural, medical and veterinary importance. As the head, I encourage involvement in projects that would assist in understanding the dynamic and interactive relationships between insects (and their allies) and plant crops, humans and their environment. Staffs under my stewardship have significant association/collaboration with many international/local organizations, institutions, mainly in research and capacity building.

## **1st Sept. 2010 – Nov 2016**

Research Scientist: In the DFID funded project domicile at IRD, I am leading a team in a project undertaking studies on the economic impact of biological control agents (BC) on stem-borer populations in East and Southern Africa (ESA). Several natural enemies were released against stem borers in ESA. However, except for the *C. flavipes* which was evaluated through careful post release surveys in the early years of 2000, none of BC agents (*X. stemmator*, *T. isis*, *C. sesamiae*) steered by icipe have been evaluated for their establishment, spread and impacts. My team is thus striving generate information on their establishment, spread from the release sites and their complementary impacts.

## **1st November 2009 – 31st October 2010:**

Postdoctoral Research Fellow at Mediterranean Institute of Ecology and Paleoecology (IMEP) / University Paul Cezanne – University de Marseille III (France). I was doing spatial analysis to understand ecological consequences of habitat change and landscape fragmentation.

## **June 2008 – 2009:**

Team Leader: Heading all stem projects (BMZ, Jircas, IRD) at icipe

Nature of work: Plan and execute stem borer management activities in all stem projects (BMZ, Jircas, IRD) at icipe. Leading a team three scientists, two PhD students and four technicians, we were involved in sampling and identification of stem borer species from both wild and cultivated fields. During this period, we raised and maintained colonies of different stem borer species and strains of natural enemies. We shipped some of the natural enemies, (Egg parasitoid - *Telenomus isis*, and larval parasitoid - *Cotesia sesamiae*), to target countries (Cameroun, Uganda, Tanzania, Mozambique) and ensured timely releases.

## **ADMINISTRATIVE RESPONSIBILITIES**

### **SCHOOL LEVEL:**

1. Head of insect science thematic area (2014 – To date)
2. School web-champion (2013 - To date)
3. Convener of the School of Biological Science curriculum review committee (2016- To data)

### **COLLEGE LEVEL:**

1. Chairman of CBPS web-champion committee (2013-2015)
2. Assistant-Chairman of CBPS web-champion committee (2016- To date)
1. April, 2013

## STUDENT SUPERVISION

### TO COMPLETION

#### MSc.

1. **Albert Otieno Owino:** Effect of temperature on the life history of *Liriomyza trifolii* (Burgess) (Diptera: Agromyzidae)
2. **Peter Njenga:** In silico and molecular analysis of xptA protein toxin genes of *Xenoharbdus* sp. And efficacy of the bacterium on *Sitophilus zeamais* and *Prostephanus truncatus*
3. **Duncan Kobia:** Diversity and distribution of immature vectors of malaria and Rift valley fever in habitats along altitudinal gradient in Baringo county, Kenya
4. **Kevin Sambai:** Effect of temperature on their synchrony of stem borer pests and their associated larval parasitoids

#### PhD

1. **Steven Omondi:** Reproductive Biology and population ecology of *Senegalia Senegal* (L.) Britton within Lake Baringo woodland ecosystems, Kenya

### THESIS SUBMITTED FOR EXAMINATION

#### MSc

1. **Charles Kwadha:** Determination of attractant semio-chemical of the wax moth, *Galleria mellonella* L., in Honey bee colonies

#### PhD

1. **Shephard Ndlela:** Development and implementation of pre- and post-harvest management measures for *Bactrocera dorsalis* (Hendel) and *Ceratitidis cosyra* (Walker) (Diptera: Tephritidae) on mango in Kenya

### ON-GOING THESIS RESEARCH/PROJECTS

#### MSc

1. **Obara, Calvin Loye:** Characterization of mosquitoes' larval habitats and assessment of their relative contribution to adult Mosquito populations in Baringo county, Kenya.
2. **Mukasa anthony nzomo:** Assessment of Nutritional Effect of different food plants on the Life Parameters of Desert Locust, *Schistocerca gregaria* (Orthoptera; Acrididae)
3. **Fridah Karegi Njeru:** Establishing optimum laboratory rearing conditions for *Acheta domesticus* (Linnaeus)-house cricket
4. **Elizabeth Amadi:**
- 5.

#### PhD

1. **Amadi, Jacinter Aluoch:** Climate-related variability in eco-hydrological conditions and its influence on malaria risk in Baringo County, Kenya
2. **Isabella M. Ondiba:** Effect of temperature and rainfall on rift valley fever and malaria vector binomics in Baringo County, Kenya
3. **Richard Owuor:**

## PUBLICATIONS

1. **Ong'amo, G.O.**, Le Rü, B., Dupas, S., Moyal, P., Calatayud, P.-A. & Silvain, J.F. (2006) Distribution, pest status and agro-climatic preferences of lepidopteran stem borers of maize in Kenya ANNALES DE LA SOCIETE ENTOMOLOGIQUE DE FRANCE 42; 171-177
2. Otieno, N.A., Le Rü, B.P., **Ong'amo, G.O.**, Dupas, S., Calatayud, P.-A., Makobe, M., Ochora, J. & Silvain, J.-F. (2006) Diversity and abundance of wild host plants of lepidopteran stem borers in two different agroecological zones of Kenya ANNALES DE LA SOCIETE ENTOMOLOGIQUE DE FRANCE 42; 371-380
3. **Ong'amo G.O.**, Le Rü B.P., Dupas S., Moyal P., Muchugu E. Calatayud P-A & Silvain J-F (2006) The role of wild host plants in the abundance of lepidopteran stem borers along altitudinal gradient in Kenya ANNALES DE LA SOCIETE ENTOMOLOGIQUE DE FRANCE 42; 363-370
4. Le Rü, B.P., **Ong'amo, G.O.**, Moyal, P., Muchungu, E., Ngala, L., Musyoka, B., Abdullah, Z., Kauma Matama, T., Lada, V.Y., Pallangyo, B., Omwega, C., Schulthess, F., Calatayud, P.-A. & Silvain, J.-F. (2006). Geographic distribution and host plant ranges of East African noctuid stem borers ANNALES DE LA SOCIETE ENTOMOLOGIQUE DE FRANCE 42; 353-361
5. Le Ru, B.P., **Ong'amo, G.O.**, Moyal, P., Ngala, L., Musyoka, B., Abdullah, Z., Cugala, D., Defabachew, B., Hailei, T. A., Kauma, T. M., Lada, V. Y., Negassi, B., Ravolonandrianina, K. J., Sidumo, A., Omwega, C. O., Schulthess, F., Calatayud, P.-A. & Silvain, J.-F (2006) Diversity of lepidopteran stem borers on monocotyledonous plants in eastern Africa and the islands of Madagascar and Zanzibar revisited BULLETIN OF ENTOMOLOGICAL RESEARCH 96; 555-563
6. Otieno, N.A., Le Rü, B.P., **Ong'amo, G.O.**, Moyal, P., Dupas, S., Calatayud, P.-A., Silvain, J.-F. (2008) Diversity and abundance of wild host plants of lepidopteran stem borers in two agro-ecological zones of Kenya. INTERNATIONAL JOURNAL OF BIODIVERSITY SCIENCE AND MANAGEMENT 4: 1-12
7. **Ong'amo, G.O.**, Le Ru, B.P., Moyal, P., Calatayud, P.-A., Ogot, P. C.K.P.O., Kokwaro, E.D., Capdevielle-Dulac, C. and Silvain, J.-F. (2008) Host plant diversity of *Sesamia calamistis*: cytochrome b gene sequences reveal local genetic differentiation ENTOMOLOGIA EXPERIMENTALIS ET APPLICATA 128; 154-161
8. **Ong'amo, G.O.**, Le Ru B.P; Campagne P., Branca, A., Calatayud P.-A., Capdevielle-Dulac, C. and Silvain J.-F. (2012) Genetic Diversity and Population Structure of *Busseola segeta* Bowden (Lepidoptera; Noctuidae): A case study of host use diversification in Guineo-Congolian rainforest relic area, Kenya. INSECTS 3; 1156-1170.
9. Baumel, S. Youssef, **G. Ongamo**, F. Médail. (2013) Habitat Suitability Assessment of the Rare Perennial Plant *Armeria Arenaria* (Pers.) Schult. (Plumbaginaceae) along the French Mediterranean Coastline. CANDOLLEA 68; 221-228.
10. Félix A-E; Calatayud P-A; Le Ru BP; Capdevielle-Dulac C; **Ong'amo G**; Silvain J-F; Frérot B. (2013). To be or not to be a species: use of reproductive isolation experiments

and genetic analysis to clarify the taxonomic status of two *Busseola* (Lepidoptera: Noctuidae) species in Kenya ANNALES DE LA SOCIETE ENTOMOLOGIQUE DE FRANCE 49; 345-354.

11. **Ong'amo, G.O.**; Le Ru, B.P.; Calatayud, P. -A.; J.-F. Silvain (2013). Composition of stem borer communities in selected vegetation mosaics in Kenya ARTHROPOD-PLANT INTERACTIONS 7; 267-275.
12. Le Ru, B. P.; Capdevielle-Dulac, C.; Toussaint, E. F. A.; **Ong'amo, G.O.**; Calatayud P. - A.; J.-F. Silvain (2014). Integrative taxonomy of *Acrapex* stem borers (Lepidoptera: Noctuidae: Apameini): combining morphology and Poisson Tree Process analyses INVERTEBRATE SYSTEMATICS 28; 451 – 475.
13. Dupas, S.; Le Ru, BP.; Branca, A.; **Ong'amo, G.O.**; Calatayud P. -A.; J.-F. Silvain (2014) Phylogeography in continuous space: coupling species distribution models and circuit theory to assess the effect of contiguous migration at different climatic periods on genetic differentiation in *Busseola fusca* (Lepidoptera: Noctuidae) MOLECULAR ECOLOGY 23; 2313-2325.
14. Onésime Mubenga Kankonda; Dudu Akaibe; Walangululu Massamba; Bruno-Pierre Le Ru; **George Otieno Ong'amo** (2014) Stem borer species composition on maize and two non-cereal hosts in the forest zone of Kisangani, DRC. JOURNAL OF AGRICULTURAL SCIENCE AND TECHNOLOGY 4; 822-829
15. **Ong'amo, GO**; Le Gall, P; Ndemah, R; Le Ru, BP (2014) Diversity and host range of lepidopteran stemborer species in Cameroon AFRICAN ENTOMOLOGY 22; 625-635
16. Khadioli, N; Tonnang, ZEH; **Ong'amo, G**; Le Ru, BP (2014) Effect of temperature on the life history parameters of noctuid lepidopteran stem borers, *Busseola fusca* and *Sesamia calamistis* ANNALS OF APPLIED BIOLOGY 165; 373-386
17. Khadioli, N; Tonnang, ZEH; Muchugu, E; **Ong'amo, G**; Le Ru, BP (2014) Effect of temperature on the phenology of *Chilo partellus* (Swinhoe) (Lepidoptera, Crambidae); simulation and visualization of the potential future distribution of *C partellus* in Africa under warmer temperatures through the development of life-table parameters BULLETIN OF ENTOMOLOGICAL RESEARCH 104; 823-823
18. Calatayud PA; Okuku G; Musyoka B; Khadioli N; **Ong'amo G** (2014) *Busseola segeta*, a Potential New Pest of Maize in Western Kenya ENTOMOLOGY, ORNITHOLOGY & HERPETOLOGY 3; 132 doi:104172/2161-09831000132
19. Gael J. Kergoat, Emmanuel F. A. Toussaint, Claire Capdevielle-Dulac, Anne-Laure Clamens, **George Ong'amo**, Desmond Conlong, Johnnie Van Den Berg, Domingos Cugala, Beatrice Pallangyo, Onesime Mubenga, Gilson Chipabika, Rose Ndemah, Michel Sezonlin, Gregoire Bani, Richard Molo, Abdalla Ali, Paul-Andre Calatayud, Laure Kaiser, Jean-Francois Silvain And Bruno Le Ru (2015) Integrative taxonomy reveals six new species related to the Mediterranean corn stalk borer *Sesamia nonagrioides* (Lefèbvre) (Lepidoptera, Noctuidae, Sesamiina) ZOOLOGICAL JOURNAL OF THE LINNEAN SOCIETY 175: 244–270

20. Juma, G; Ahuya, PO; **Ong'amo, G**; Le Ru, BP; Magoma, G, Silvain, J-F Calatayud, P-A (2015) Influence of plant silicon in *Busseola fusca* (Lepidoptera: Noctuidae) larvae – Poaceae interactions BULLETIN OF ENTOMOLOGICAL RESEARCH, DOI: 10.1017/S000748531500005X
21. P.-A. Calatayud, E. Njuguna, S. Mwalusepo, M. Gathara, G. Okuku, A. Kibe, B. Musyoka, D. Williamson, **G. Ong'amo**, G. Juma, T. Johansson, S. Subramanian, E. Gatebe, B. Le Ru (2016) ,Can climate-driven change influence silicon assimilation by cereals and hence the distribution of lepidopteran stem borers in East Africa? AGRICULTURE, ECOSYSTEMS AND ENVIRONMENT 224: 95–103
22. Le Ru BP, Capdevielle-Dulac C Conlong D; Pallangyo B; van den Berg J; **Ong'amo G**; Kergoat GJ (2015) A revision of the genus *Conicofrontia* Hampson (Lepidoptera: Noctuidae: Apameini), with description of a new species: new insights from morphological, ecological and molecular data ZOOTAXA 3925; 56-74 DOI: 10.11646/zootaxa392514
23. Omondi SF, Odee DW, **Ongamo GO**, Kanya JI and Khasa DP (2016). Effects of Anthropogenic Disturbances on Natural Regeneration and Population Structure of Gum Arabic Tree (*Acacia senegal*) in the Woodland of Lake Baringo Ecosystem, Kenya. JOURNAL OF FORESTRY RESEARCH. DOI: 10.1007/s11676-016-0349-4.
24. Soul-kifouly G. Midingoyi, Hippolyte D. Affognon, Ibrahim Macharia, **Georges Ong'amo**, Esther Abonyo, Gerphas Ogola, Hugo De Groote, Bruno Le Ru (2016) Assessing the long-term welfare effects of the biological control of cereal stemborer pests in East and Southern Africa: Evidence from Kenya, Mozambique and Zambia Agriculture, ECOSYSTEMS AND ENVIRONMENT 230: 10–23
25. Omondi SF, Odee DW, **Ongamo GO**, Kanya JI and Khasa DP (2016). Genetic consequences of anthropogenic disturbances and population fragmentation in *Acacia senegal*. CONSERVATION GENETICS 17(6), 1235-1244. DOI: 10.1007/s10592-016-0854-1.
26. Omondi SF, Odee DW, **Ongamo GO**, Kanya JI and Khasa DP (2016). Synchrony in leafing, flowering and fruiting phenology of *Senegalia senegal* within Lake Baringo woodland, Kenya: Implication for conservation and tree improvement. INTERNATIONAL JOURNAL OF FORESTRY RESEARCH, Volume 2016, Article ID 6904834.
27. Bruno Le Ru, Claire Capdevielle-Dulac, Boaz K. Musyoka, Beatrice Pallangyo, Mohamedi Njaku, Onésime Mubenga, Gilson Chipabika, Rose Ndemah, Grégoire Bani, Richard Molo, **George Ong'amo** and Gael J. Kergoat (2017) Phylogenetic analysis and systematics of the *Acrapex unicolora* Hampson species complex (Lepidoptera, Noctuidae, Noctuinae, Apameini), with the description of five new species from the Afrotropics EUROPEAN JOURNAL OF TAXONOMY 270: 1–36
28. S. Ndlela, S. Mohamed, P.N. Ndegwa, **G.O. Ong'amo** & S. Ekesi (2016) Male annihilation technique using methyl eugenol for field suppression of *Bactrocera dorsalis* (Hendel) (Diptera: Tephritidae) on mango in Kenya. AFRICAN ENTOMOLOGY 24(2): 437–447

29. Omondi SF, **Ongamo GO**, Kanya JI, Odee DW and Khasa DP (In press) Mating patterns dynamics of the gum arabic tree (*Senegalia senegal*) in contrasting anthropogenic-disturbed habitats. NEW FOREST.
30. S. Ndlela, S. Ekesi, P.N. Ndegwa, **G.O. Ong'amo** & S. A. Mohamed (2017) Postharvest disinfestation of *Bactrocera dorsalis* (Hendel) (Diptera:Tephritidae) in mango using hot water treatments. JOURNAL OF APPLIED ENTOMOLOGY
31. **Ong'amo GO**, Pallangyo B, Ali A, Njaku M, Musyoka BK, Le Ru B.P (In press) Diversity and abundance of lepidopteran stem borers and their respective native hosts in different vegetation mosaics in Tanzania. AFRICAN ENTOMOLOGY.

#### MANUSCRIPTS UNDER PREPARATION

1. Alfred O. Ochieng, Mark Nanyingi, **George Ong'amo**, Edwin Kipruto, Fred A. Amimo, Christopher Oludhe, Isaac K. Nyamongo and Benson B.A. Estambale A: Retrospective Analysis of Climatic Drivers of the 2006-2007 Rift Valley Fever Outbreak in Baringo County, Kenya
2. Abonyo, E. A., **Ong'amo, G. O.**, Lukhoba, C., Nyamasyo, G., Ogola, G., Midingoyi, S., Affognon, H., Le Ru, B.: Do parasitoids reduce cereal losses? Estimating the impact of parasitoids on stem borer pest infestation and maize yield.

#### BOOK CHAPTERS

1. **Ong'amo, G.**; Khadioli, N.; Le Ru, B.; Mujica, N.; Carhuapoma, P. 2016. Spotted stemborer, *Chilo partellus* (Swinhoe 1885). In: Kroschel, J.; Mujica, N.; Carhuapoma, P.; Sporleder, M. (eds.). Pest distribution and risk atlas for Africa. Potential global and regional distribution and abundance of agricultural and horticultural pests and associated biocontrol agents under current and future climates. Lima (Peru). International Potato Center (CIP). ISBN978-92-9060-476-1. DOI 10.4160/9789290604761 - 13. pp. 169 - 181
2. **Ong'amo G.**; Khadioli, N.; Le Ru, B.; Mujica, N.; Carhuapoma, P. 2016. Maize stalk borer, *Busseola fusca* (Fuller 1901). In: Kroschel, J.; Mujica, N.; Carhuapoma, P.; Sporleder, M. (eds.). Pest distribution and risk atlas for Africa. Potential global and Regional distribution and abundance of agricultural and horticultural pests and associated biocontrol agents under current and future climates. Lima (Peru). International Potato Center (CIP). ISBN 978 - 92 - 9060 - 476 - 1. DOI 10.4160/9789290604761 - 14. pp. 182 - 194
3. **Ong'amo G.**; Khadioli, N.; Le Ru, B.; Mujica, N.; Carhuapoma, P. 2016. African Pink stemborer, *Sesamia calamistis* (Hampson 1910). In: Kroschel, J.; Mujica, N.; Carhuapoma, P.; Sporleder, M. (eds.). Pest distribution and risk atlas for Africa. Potential global and regional distribution and abundance of agricultural and horticultural pests and associated biocontrol agents under current and future climates. Lima (Peru). International Potato Center (CIP). ISBN978-92-9060-476-1. DOI 10.4160/9789290604761-15. pp.195-207

## REVIEWER (JOURNALS)

1. African journal of ecology (4)
2. Agricultural and Forest Entomology (1)
3. International journal of tropical insects (1)
4. Journal of Asia-Pacific Entomology (1)
5. Pest Science (1)
6. Phytoparasitica (3)

## GRANTS/FUNDINGS

1. JEAI –IRD “Incidence of climate change on agricultural systems in Kenya” 50,000 Euros - November 2011.
2. French Embassy in Kenya “Inception Workshop”- 2,000 Euros November, 2011
3. PPR PAREGO “Rural farming resources and practices in a changing environment” - 5,500 Euros - September 2012.
4. icipe - African Insect Science for Food and Health MSc. training “incidence of climatic changes on parasitoid and stem borer interactions” - US\$ 6,500 December, 2012.
5. DFID-Icipe - African Insect Science for Food and Health “Impact of biological control of stem borer on maize and sorghum production in East and Southern Africa” US\$ 505,080

## CONSULTANCIES

1. **Nov 2014 – Dec. 2016:** Research consultant in Institut de recherche pour le développement (IRD) project initiated to investigate performance and susceptibility of different maize varieties grown by small holder farmers in different Agro-Ecological Zones (AEZs) in Kenya. I was involved in the design and implementation of the field experiments in Kendu-Bay, Machakos and Mtwapa sites.
2. **Nov 2014 – Dec. 2015:** Research consultant in *Bt* maize project funded by African Agricultural Technology Foundation (AATF) and implemented by International Maize and Wheat Improvement Centre (CIMMYT) in collaboration with Kenya Agricultural & Livestock Research Organization (KALRO).
  - a. Collected data on efficacy of *Bt* maize against pests in Confined Field Trials (CFT) in Kiboko.
  - b. Determined potentials of natural habitats in insect resistance management (IRM) associated with deployment *Bt*-maize seeds.
3. **Oct 2014 – Dec. 2016:** Research consultant in Water Efficient Maize for Africa (WEMA) project, a project focusing on development of drought-tolerant and insect-protected maize varieties using conventional breeding and marker-assisted breeding. In consultation with CIMMYT team, I led studies on performance of developed varieties in Kiboko and Kitale.



## COMMUNITY SERVICE

1. Board member Madungu secondary school, Siaya county
2. Chairman, Lukongo Luduha self-help group.
3. Integrated management of Malaria and RVF vectors – Community education in West Pokot (February 2017)

## REFEREES

Dr. Francis **NANGAYO**, Senior Manager and Head of Regulatory Affairs, The African Agricultural Technology Foundation (AATF) P.O. Box 30709 – 00100, Nairobi, Kenya. Mobile. +254-735992203; Email: [f.nangayo@aatf-africa.org](mailto:f.nangayo@aatf-africa.org)

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