

## Enoch Ng'oma

Postdoctoral Fellow  
401 Tucker Hall  
Division of Biological Sciences  
University of Missouri-Columbia  
65211 Missouri  
USA

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### EDUCATION

2013 Dr. rer. nat. Genetics, Friedrich Schiller University Jena, Germany  
2006 MSc. Evolution and Biodiversity, University of Oslo, Norway  
2000 B.Ed. Biology, Chancellor College, University of Malawi, Zomba, Malawi

### RESEARCH EXPERIENCE

#### Postdoctoral experience

2015 – present King Lab, Division of Biological Sciences, University of Missouri  
Advisor Dr. Elizabeth G. King  
Research theme Life history evolution in fruit flies

2013 Biology of Ageing, Fritz Lipmann Institute for Age Research, Germany  
Advisor Dr. Alessandro Cellerino  
Research theme Pigmentation genetics, ageing genomics and complex traits, in the short-lived African killifish

#### Graduate Research

2009 – 2013 Biology of Ageing, Fritz Lipmann Institute for Age Research, Germany  
Advisor Dr. Alessandro Cellerino  
Thesis title Identification of gene loci responsible for age-related pathologies in natural populations of the short-lived fish *Nothobranchius furzeri*.

2004 – 2005 Natural History Museum, University of Oslo, Norway  
Advisor Prof. Dr. Brita Stedje,  
Thesis title Genetic diversity and population structure in the African Pencil cedar, *Juniperus procera* (Cupressaceae), East Africa

### RESEARCH INTERESTS

1. Quantitative genetics and genomics of life history diversity
2. Evolution of life histories and aging
3. Molecular ecology of natural populations
4. Systematics
5. Ecology and evolution of plant-animal interactions

# ENOCH NG'OMA

## EMPLOYMENT & APPOINTMENTS

- 2007 – 2009 Lecturer, Genetics and Evolution, Chancellor College, Univ. of Malawi  
2001 – 2007 Scientific Officer, National Herbarium & Botanic Gardens of Malawi  
2006 – 2007 Southern Africa Regional Officer, Plant Resources of Tropical Africa (PROTA)  
2000 – 2001 O' Level Biology Teacher, Ministry of Education, Malawi  
2006 – 2007 Vice Chairperson, Internal Procurement Committee, NHBG, Malawi

## GRANTS, AWARDS AND FELLOWSHIPS

- 2017 Douglas D. Randall Young Scientist Travel Award, University of Missouri-Columbia  
2017 Postdoctoral Association Travel Award, University of Missouri  
2012 Training Award in Regression Methods. Leibniz Graduate School on Aging (LGSA)  
2012 International Travel Grant, Leibniz Graduate School on Aging (LGSA)  
2003 Research Grant, National Research Council of Malawi (NRCM)  
2001 Earthwatch Organization Fellowship, Wechau Hippo Sanctuary in Ghana  
2000 Tropical Biology Association (TBA) Fellowship for a field course in Kenya  
2000 Outstanding student project award, Tropical Biology Association in Kenya

## PUBLICATIONS

1. **Ng'oma E**, Perichery, AM & King, EG. (2017). How to get the most bang for your buck: the evolution and physiology of nutrition-dependent resource allocation strategies. *Proceedings of the Royal Society B* 284: 20170445.
2. Stanley, PD, **Ng'oma, E**, O'Day, S & King, EG (2017). Genetic dissection of nutrition-induced plasticity in insulin/insulin-like growth factor signaling and median life span in a *Drosophila* multiparent population. *Genetics* 206(2): 587-602.
3. **Ng'oma E**, Groth M, Ripa R, Platzer M & Cellerino A (2014). Transcriptome profiling of natural dichromatism in the annual fishes *Nothobranchius furzeri* and *N. kadleci*. *BMC Genomics* 15:754.
4. **Ng'oma E**, Reichwald K, Dorn A, Wittig M, Balschun T, Franke A, Platzer M and Cellerino A. (2014). The age related markers lipofuscin and apoptosis show different genetic architecture by QTL mapping in short-lived *Nothobranchius* fish. *Aging* 6(6):468-480.
5. Terzibasi Tozzini E, Dorn A, **Ng'oma E**, Polaik M, Blaek R, Reichwald K, Petzold A, Watters B, Reichard M, & Cellerino A (2013). Parallel evolution of senescence in annual fishes in response to extrinsic mortality. *BMC Evolutionary Biology* 13: 77.
6. **Ng'oma, E**, Valdesalici S, Reichwald K, & Cellerino A (2013). Genetic and morphological studies of *Nothobranchius* (Cyprinodontiformes) from Malawi with description of *Nothobranchius wattersi* sp. nov. *Journal of Fish Biology* 82(1): 165-188.
7. **Ng'oma E**, Dorn A, Janko K, Polačik M, Platzer M, Reichwald K, Cellerino A, & Reichard M (2011). Phylogeny, genetic variability and colour polymorphism of an emerging animal model: the short-lived annual fish *Nothobranchius furzeri*. *Molecular Phylogenetics and Evolution* 61(3): 739-749. (\*Shared co-first authors)

## ENOCH NG'OMA

8. Jamu DM & **Mlangeni\* E** (2001). Influence of Tilapia escapees from fishponds and pond sitting on stream fish species composition and water quality in the Mpira Stream, Zomba District, Malawi. *Malawi Journal of Science and Technology* 6: 57-64.
  9. Msekandiana G & **Mlangeni\* E** (2002). Malawi. In: Southern African Plant Red Data Lists, J.S. Golding (ed.). Southern African Botanical Diversity Network Report No. 14: 31-42. SABONET, Pretoria.
- NB: \*In 2007 I officially re-arranged names through the Office of President & Cabinet in Malawi.

### PRESENTATIONS

1. **Ng'oma E**, Middleton K, King EG (2017). Evolution Conference, Portland, Oregon
2. **Ng'oma E**, Perinchery A, Stanley PD, King EG (2017). Coordination of resource availability with allocation in a natural population: lifespan and its heritability across dietary regimes. 58<sup>th</sup> Annual Drosophila Conference, San Diego, California.
3. **Ng'oma E**, Platzer M, Cellerino A. (2016). New wine in old skin: classical and modern methods reveal the genetic basis of male dichromatism in annual killifishes. Evolution Conference, Austin, Texas.
4. **Ng'oma E**, Perinchery A, Stanley PD, King EG (2017). Coordination of resource availability with allocation in a natural population: lifespan and its heritability across dietary regimes. Missouri Life Sciences Week. University of Missouri-Columbia.
5. **Ng'oma E**, Reed, M, Fidelis W, King, EG (2016). The genetic basis of the coordination between nutrition and resource allocation in a synthetic population of *Drosophila melanogaster*. The Allied Genetics Conference (TAGC), Orlando, Florida.
6. **Ng'oma, E** (2016). From fish to flies: finding the genes for simple and complex traits. ECOLUNCH Seminar Series, University of Missouri.
7. **Ng'oma, E** (2014). Genetic mapping of tail colour and age-related phenotypes in *Nothobranchius* spp. 1<sup>st</sup> Nothobranchius Symposium, Pisa, Italy.
8. **Ng'oma, E** (2013). Genetic mapping of tail colour and age-related phenotypes in *Nothobranchius* fishes, Max Planck Institute for Biology of Ageing, Cologne, Germany.
9. **Ng'oma, E**, Reichwald, K, Cellerino, A (2012). Mapping quantitative trait loci (QTL) for ageing-related histological phenotypes in *Nothobranchius* fishes. Molecular Genetics of Ageing Conference, Cold Spring Harbor Laboratory, New York
10. **Ng'oma, E**, Cellerino, A (2011). Towards the genetic architecture of age-related dysfunctions and colouration in *Nothobranchius* species. German Genetics Society Conference, Würzburg, Germany.

# ENOCH NG'OMA

## TEACHING EXPERIENCE

- 2007 – 2009 Lecturer, *Advanced Genetics*, Chancellor College, University of Malawi  
2007 – 2009 Lecturer, *Introduction to Evolution*, Chancellor College, University of Malawi  
2000 – 2001 *Secondary school biology (O'Level)*, Ministry of Education, Malawi

## PROFESSIONAL SOCIETIES

- Society for the Study of Evolution (SSE)  
Genetics Society of America (GSA)  
Tropical Biology Association (TBA)  
Earthwatch Organization

## WORKSHOPS AND LECTURES

- 2015 Dee Fink Accelerated Learning Course Development  
2012 Participant: Statistical Genetics, University of California Los Angeles (UCLA)  
2012 Participant: Regression Methods. 12-week online course, Germany  
2007 Organizer: PROTA International Workshop, Lilongwe Hotel, Malawi  
2008 Lecture series: MSc. Environmental Science (MES) on Renewable energies, Chancellor College, University of Malawi

## MENTORING

- 2015 – present: Training, support, and mentoring undergraduate projects, King Lab  
2010 Master thesis: Gift Gladson Moyo, "A comparative study of factors influencing the abundance and distribution of palms, *Raphia farinifera* in Naiwale stream and its two neighbouring streams in Zomba District"  
2008 Bachelor thesis: Henry Gilbert Tembwe, "Effects of biotic and abiotic factors on the distribution status of *Mondia whytei* in Zomba