

CURRICULUM VITAE

Contact information

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Personal information

Date of birth: 22nd January 1981
Place of birth: Mt. Elgon, Kenya
Citizenship: Kenyan
Sex: Male

Education background

PhD in Evolutionary Biology and Ecology, University of Montpellier II, France: 2014
Thesis: Contribution to the knowledge of wild populations of Nile tilapia (*Oreochromis niloticus*) inhabiting extreme conditions of temperature and alkalinity

Master of Science, Animal ecology, Kenyatta University, Kenya: 2011,
Thesis: Assessment of water quality and fish productivity in three undrainable reservoirs of Naromoru, Nyeri County, Kenya

Bachelor of Education Science, Kenyatta University, Kenya: 2006,
Award: Second Class honors, Upper division

Kenya Certificate of Secondary Education, Nakuru High School, Kenya: 1999.

Kenya Primary Certificate of Education, Osorongai Primary School, Trans-Nzoia District, Kenya: 1995.

Work Experience

2016 (January – Present) – Lecturer, University of Nairobi

2015 (July – December) – Research Scientist, National Museums of Kenya

2013 – 2014: CIRAD laboratory, Montpellier

Determination of sex reversal in Nile Tilapia inhabiting hot-springs of Bogoria through molecular and cytogenetic approaches;

- DNA extraction, electrophoresis, PCR amplification of sex linked genes and analysis by Single Nucleotide Polymorphism (SNP)

- Chromosomal metaphase preparation

2013 (March): National Museum of Natural History of Paris, France Fish sample analysis based on cytological approach:

- BAC probe screening and Fluorescence in Situ Hybridization (FISH)

2012 – 2014 University of Montpellier II, ISEM laboratory in Montpellier, France Determination of genetic variability of Nile Tilapia (*Oreochromis niloticus*) from habitats with extreme conditions;

- DNA extraction, electrophoresis, PCR amplification using mitochondrial markers and their analysis
- DNA extractions, electrophoresis, PCR amplification using microsatellite markers and their analysis

2012 National Museums of Kenya, Ichthyology laboratory in Nairobi, Kenya

Determination of morphological variations of wild populations of Nile tilapia living in extreme environmental conditions in the Kenyan Rift-Valley using geometric morphometrics

2009 – 2012: Research Intern / Student Affiliate at National Museums of Kenya

Roles and responsibilities:

- Tissue management and Data entry for Kenya Barcoding Initiative Fish studies
- Morphological studies for selected fish species
- Database and specimen curation for Lake Victoria Bioinformatics Project

Projects and field experiences

- Fish taxa inventory research in Rift-Valley and L. Victoria water basin wetlands, Ministry of Environment and Natural Resources project (October –December 2011)
- Field and laboratory work on barcoding fish species of Lake Victoria basin Rivers (October 2010)
- Assistant researcher, assessing the relative abundance and water quality of Lake Nakuru (September 2010),
- Field and laboratory assistant IRES-NSF collaborative Fish project (NMK, University of Nairobi and Tulane University (USA) (July 2010)
- Morphometric studies of *Oreochromis spilurus* (Sabaki Tilapia); *Garra dembensis*, *Labeo* species of Mt Kenya region.
- DNA extractions and PCR Cytochrome b site for IRES-NSF project fish species

Supervisor, Population and housing census, Ministry of Planning (August and 2009)

Polling and counting clerk, Presidential and parliamentary general election, Ministry of Planning (December, 2007)

Science Teacher, Biology and Chemistry, Kamoi Secondary School (2006-2007)

Science Teacher on attachment from Kenyatta University, Biology and Chemistry, St. Anthony Boys High School (May-August 2005),

Polling and counting clerk, 2002 presidential and parliamentary general election. Ministry of Planning (December, 2002)

Workshops and Training

Local fishbase and fish taxonomy training session held at the National Museums of Kenya, Nairobi (23rd – 29th September 2016)

- Facilitated training on taxonomic identification of fishes based on molecular and morphological technics

Climate Change Vulnerability Impact assessment workshop held at Lukenya Getaway, Nairobi (15th – 18th June 2015)

Wetland mapping and inventorying workshop held in Waterbuck Hotel, Nakuru (6th – 8th October 2011)

Biodiversity research of Loboï Swamp, Kenya Wetlands Research Project, KENWEB (August 2011)

- Field excursion
- Fish identification and genetic analysis

Biodiversity research on Tana Delta, Kenya Wetland Biodiversity project (May 2011)

- Field excursion
- Fish identification and genetic analysis

Fish biodiversity research on Rift-Valley and Western Rivers of Kenya (July – August 2011)

- Field excursion
- Laboratory analysis
- Fish identification and genetic analysis

Fish biodiversity research on upper catchment of the Rivers Tana, Athi and Northern Ewaso Nyiro (July – August 2010)

- Field excursion
- Laboratory analysis of water quality
- Fish identification and genetic analysis

Basic fish taxonomy and Systematics, Lake Victoria Bioinformatics Project (April, 2010)

- Introduction to the identification of L. Victoria fish
- Theory and practice of fish taxonomy and morphometric analysis
- Fish curation and collection management

Computer training, Emanex Computer College, Microsoft package (MS Word, Access, MS Dos, MS Excel, MS Powerpoint)

Student supervision

Ngodia Sylvia Naipamei (J56/12550/2018). MSc. Genetic characterization of fish populations found in Mathioya Riverine ecosystem Murang'a County, Kenya. Started 2019

Geraldine Wangui Mburu (A60/13779/2018). An assessment of citizen science in the conservation of Grevy's zebra: Westgate conservancy, Kenya. Started 2019

Jane Wanjira Muthee (J56/11830/2018). MSc. Effectiveness of deterrent lights in mitigating human carnivore conflict in Meibae community conservancy, Kenya. Started 2019

Getrude Tausi Leshamta (A82/53861/2018). Assessing the relationship between the extinction of fish species and ocean governance under changing climate in Kenya. Started 2019.

Misael Osano Otieno (J56/7757/2017). MSc. Assessment of avifaunal community status in wetlands of Murang'a County. Started 2018

Eunice M. Kumunga (A82/50969/2016). PhD. Assessment of local wetland governance and its effects on management of water resources in Rwamuthambi sub catchment, Kirinyaga County. Started 2018.

Salad Jillo Tutana (A60/88807/2016). MSc. Impacts of land use change on the Lorian swamp ecosystem. Completed

Publications

Ndiwa C. T, Nyingi D, Agnès J. F. Results of 100 years isolation on the genetic diversity of Nile tilapia (*Oreochromis niloticus*) population of Crocodile Lake in Central Island of Lake Turkana – Manuscript submitted to journal of fish biology

Kumunga E, **Ndiwa C. T** and Nzioka J. 2020. Towards a framework for monitoring and communicating water resources sustainability: A case study of Rwamuthambi Sub Catchment area, Kenya. *Journal of Sustainability, Environment and Peace*, 3(1), 21-33.

Ndiwa C. T, Nyingi D, Wemali E, Yusuf HA. 2017. Seafood value chains and mangrove restoration in Mida Creek. In Leew J, Koech G, Yaye A, Nyongesa J. 2017. A review of best practice in the Horn of Africa with biodiversity based value chain development for pro-poor biodiversity conservation. ICRAF. Pp 63 – 71.

Ndiwa C. T, Nyingi D, Claude J, Agnès J. F. 2016. Morphological variations of wild populations of Nile tilapia (*Oreochromis niloticus*) living in extreme environmental conditions in the Kenyan Rift-Valley. *Environ. Biol. Fish.* 99:473–485.

Ndiwa C. T, Nyingi D, Agnès J. F. 2014. An important natural genetic resource of *Oreochromis niloticus* (Linnaeus, 1758) threatened by aquaculture activities in Lobo drainage, Kenya. *PLoS ONE* 9(9):e106972.

Ndiwa C. T, Mwangi, B. M, Kairu E, Kaluli, J. W and Nyingi D. (2012). Physicochemical Characteristics of Undrainable water dams utilised for fish rearing in the Semi-arid Naromoru area, Central Kenya. *Journal of Agriculture, Science and Technology*, 14(2): 45-55.

Mwangi B. M, **Ndiwa T. C** and Njumbe J. J. 2011. The Impacts of Sporadic effluent pollution of Tigoni Dam, Kiambu District published in the “Proceedings of the 3rd Scientific Conference on the Ecological Society for Eastern Africa, January 2011

Njagi, E., Bett A., Atai, E., **Ndiwa T.** 2011. Assessment of water quality and relative abundance of *Alcolapia grahami* in Lake Nakuru, Kenya. NMK conference proceedings, 7 - 9th November, 2011.

Conferences

Conference on “Integrating Human Dimensions into Fisheries and Wildlife Management” held on 11th – 13th January 2016 in Fairmont Hotel, Nanyuki, Kenya.
Paper presentation: The impacts of human development on biodiversity and ecosystem services in Lobo Swamp, Kenya

Symposium on gonadal differentiation in invertebrates (Réunion Transversale: “Différenciation des gonades chez les vertébrés) held on 11 Juin 2014 at Genopolys Montpellier, France.

Paper presentation: Analysis of three linkage groups associated with sex in wild populations of Nile tilapia (*Oreochromis niloticus*) living in hot springs of Kenya

National Museums of Kenya 3rd Biennial Scientific Conference: Heritage management for sustainable development (November 2011)

Paper presentation: Fish biodiversity in some Rivers of western Kenya and part of the rift-valley

Climate change and natural resource use in Eastern Africa: Impacts, adaptations and mitigation, Ecological Society for Eastern Africa Conference (May, 2010)
Paper presentation: The impacts of sporadic effluent pollution on Tigoni Dam, Kiambu district, Kenya.

First Kenyatta University Research Conference on Management of natural resources for wealth creation (April, 2009)
Paper presentation: Water Quality and Planktonic Community of Semi-arid area of NaroMoru, Kenya

Professional societies

Member - Association of France Allumini in Kenya (AFRAKEN)
Member – Kenyatta University Alumni
Member - Samaki Working Group
Member - Ecological Society of Eastern Africa (ESEA)
Member - Kenya Wetland Biodiversity Research Team (KENWEB) New IRD Team

Referees

Dr. Jean-François Agnès
(Director de Recherche, I.R.D.)
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Dr. Wanja Dorothy Nyingi,
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