

Jacob. K. Moutouama

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EDUCATION

2022- present: **Postdoctorate research associate**, Department of Bioscience at Rice University
2022: **Ph.D. in Ecology and Evolutionary Biology**, Department of Ecology and Evolutionary Biology, University of Tennessee at Knoxville (Advisor: Orou Gaoe)
2016: **MS in Forestry**, Graduated with Highest Honors, University of Parakou, Benin
2012: **BS in Forestry and Wildlife**, Graduated with Highest Honors, University of Parakou, Benin

ADDITIONAL TRAINING

October 2021: **Plant-People Interactions: Ethnobotany in the 21st Century**. Organization of Tropical Studies. *Online Course*

December 2020: **Bayesian Modeling for Socio-Environmental Data Short Course**. National Socio- Environmental Synthesis Center (SESYNC), Maryland

November 2020 : **Adaptive Management**. National Institute for Mathematical and Biology Synthesis at the University of Tennessee, Knoxville.

December 2018: **Applications of Spatial Data: Ecological Niche Modeling**. National Institute for Mathematical and Biology Synthesis at the University of Tennessee, Knoxville.

January 2018: **Modeling for Epidemiology, Ecology and Conservation**; African Mathematical School, Laboratory of Biomathematics and Forest Estimations, University of Abomey Calavi, Benin

Nov-Dec 2016: **Tropical Ecology Fields course**. Tropical Biology Association, Madagascar

May 2016: **Population modelling**. School of Forestry and wood engineering (Benin), Department of Biometry and Environment analysis (Germany)

PUBLICATIONS

Published Journal Articles

Moutouama JK and Gaoe OG. Altitude mediated soil properties, not geography or climatic distance, explains the abundance of a tropical endemic herb. *Ecology and Evolution*. 10.1002/ece3.8572

Moutouama JK and Gaoe OG. Soil nitrogen mediates the effect of climatic distance on herbivory rates in a tropical herb. *Biotropica*. 10.1111/btp.13082

Gaoue O G., **Moutouama JK**, Coe M., Bond M. O. Bond, Green E., Sero N. B., Bezeng B. S., and Yessoufou K. Methodological advances for hypothesis-driven ethnobotany. *Biological Review*. 2021.00-00. 10.1111/brv.12752

Moutouama J. K., Fandohan A. B., Biaou S. S. H., Amahowe O. I., Moutouama F. T. & Natta A. K. (2016). Potential climate change favored expansion of a range limited species, *Haematostaphis barteri* Hook f. *Journal for Agriculture and Environment for International Development*. 110 (2): 397- 411. DOI: 10.12895 5/jaeid.20162.516

Fandohan A. B., **Moutouama J. K.**, Biaou S. S. H., Gouwakinnou G. N., Adomou C. A., (2015). Le réseau d'aires protégées Bénin-Togo assure-t-il la conservation de *Thunbergia atacorensis* (Acanthaceae)? *Revue CAMES Science de la Vie, de la terre et Agronomie* 3(02) : 2424-7235.

Biaou S. S. H., **Moutouama J. K.**, B. S. C. Dan, Amahowe O. I., Moutouama F. T. & Natta A. K. (2016). Uses of *Haematostaphis barteri* Hook f among Waaba and Betamaribè in North Benin and impact of the vulnerability of the species. *International Journal of Biodiversity and Conservation*. Vol. 9(5), pp. 146-157, DOI: 10.5897/IJBC2016.1063

Manuscripts in Review

Yarou AB, **Moutouama JK** and Gaoue OG. Non-monodominant understory in monodominant stands of a tropical tree in West Africa. *Environmental Conservation*.

Moutouama JK and Gaoue OG. Soil heterogeneity, rather than climate or geography, drives the population dynamics of a tropical range-limited plant. *Ecology*. *Accepted with revisions*

Moutouama JK and Gaoue OG. Non-random selection of medicinal plant used around the biosphere reserve of Pendjari in West-Africa. *People and nature*. *Accepted with revisions*

Manuscripts in Preparation

Moutouama JK and Gaoue OG. The center-periphery hypothesis revisited: a meta-analysis. *Nature Ecology and Evolution*

Gaoue O G., **Moutouama JK**, and Sero N. B. Failure to buffer: demography lability in a long-lived plant in response to high harvest and dry climate. *The American Naturalist*.

CONTRIBUTED TALKS

Moutouama J. K. Nitrogen in soil mediates the effect of distance from climatic center on herbivory rate. July 2021. Association for Tropical and Biological Conservation.

Moutouama J. K. Demographic response of a range-limited tropical plant to climatic and geographic gradients shapes its population dynamics from center to periphery. August 2021. Ecological Society of America.

Moutouama J. K., Fandohan A. B. et Biaou S. S. H. 2015. Climate change and *Thunbergia atacorensis* a rare and endemic species of West-Africa, Implications for better conservation. 27th International Congress on conservation of biology. 02-06 August Montpellier France.

Moutouama J. K., Biaou S. S. H. et Amahowé I. Impacts de l'exploitation de *Haematostaphis barteri* (Hook f.) Sur la vulnérabilité de l'espèce au Bénin. Premier atelier sur les espèces Négligés et sous utilisées du Bénin. 2014 Abomey-Calavi, au Benin.

AWARD & GRANTS (\$ 51718.59)

Travel Grant for Ecological Society of America 2022. Plant Population Ecology Section. \$600

Small Research Grants British Ecological Society 2022. Genetic diversity as a driver of population dynamics. 2021-2022. \$6302

Hochman Award 2022. Linking genetic diversity and population dynamics to understand range limitation in *Thunbergia atacorensis* populations. 2021-2022. \$750

SARIF Open Publishing Support Fund (OPSF). Altitude-mediated soil properties, not geography or climatic distance, explain the distribution of a tropical endemic herb. \$1760

Organization of Tropical studies scholarship. Plant-People Interactions: Ethnobotany in the 21st Century. October 2021. \$300

One time Fellowship, Graduate School University of Tennessee at Knoxville. \$1500

Lewis Clark Grant. Linking genetic diversity and population dynamics to understand range limitation in *Thunbergia atacorensis* populations. 2021-2022. \$4900

Breedlove, Dennis Fund Awards for Student Botanical Field Experiences. Understanding the effect of insect herbivory on the dynamic *Thunbergia atacorensis*, an endemic perennial herb in West-Africa. 2021. \$1,000

The Graduate Student Senate Travel Awards 2021: EMNTools: a hands-on workshop. Spain 2020. \$306.59

Rufford Small Grant: Conserving gallery forests threatened by human pressure in Northern Benin (2020-2021). \$7500

Association for Tropical Biology and Conservation (ATBC) Seed Research Grant: Herbivory as driver of center-periphery dynamics in an endemic plant species (2021): \$1000

National Institute for Mathematical and Biological Synthesis (NIMBioS) Graduate Award, (2019- 2020). \$2500

Best progress toward Dissertation 2019, Department of Ecology and Evolutionary Biology, University of Tennessee at Knoxville

British Ecological Society (Ecologists in Africa). Plant-soil feedback as a driver of center-periphery dynamics for the endemic herb, *Thunbergia atacorensis* (2019-2021). \$14,500

Breedlove, Dennis Fund Awards for Student Botanical Field Experiences. Understanding how the variation between the visitations by pollinators is related to flower traits and how the strength of this link varies between the center and the periphery. 2019. \$1,000

McClure Scholarship, University of Tennessee at Knoxville. Spatially explicit cost of reproduction and implication for evolutionary demography (2019-2020). \$ 5000

Society for conservation Biology Graduate student Awards. Understanding pattern of medicinal plants selection along a threatened hotspot of biodiversity in Northwestern Benin, West Africa. 2019. \$1000

Graduate student Competition, Ecology and evolutionary Biology (UTK) Herbivory as driver of center-periphery dynamics in an endemic plant species. 2019. \$2500.

Tropical Biology Association Course: Full funded, 2016.

RESEARCH INTERESTS

Structured models, Biotic interactions, Conservation Biology and Ethnobiology.

MENTORING STUDENTS

Mentor of 5 undergraduate students (on statistical analysis with R and GIS) for an International research Experience in Africa with National Science Foundation.

CLASSES TAUGHT AS TEACHING ASSISTANT AT UTK

EEB 587 Population modelling with R, EEB 304 Economic Botany, BIO260: General Ecology, BIO150 (Skills of Biological Literacy), EEB 403 (Field Botany), MAT405: Models in Biology, EEB560: Biometry