



DR. BUKOMBE JOHN KIJA

Employed by the Tanzania Wildlife Research Institute| Principal Researcher II |
Director, Southern Highland Wildlife Research Centre

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Nationality: Tanzanian

1. PROFILE SUMMARY

Wildlife ecologist and conservation leader with over 17 years of experience in biodiversity research, invasive species management, and ecological restoration in Tanzania. Proven expertise in project design, scientific research, stakeholder engagement, and policy development, with a strong track record of attracting competitive funding and leading multi-disciplinary teams. Widely published in high-impact journals and contributor to global biodiversity assessments, with recognition for patented innovations in botanical-based skin-care and hair-growth products.

2. EDUCATION

Year	Degree	Institution	Specialization
2015	Ph.D.	University of Dar es Salaam, Tanzania	Wildlife Ecology – Herbivore Forage, Patch Selection, and Distribution
2005	M.Sc.	Addis Ababa University, Ethiopia	Biology – Dryland Biodiversity
2000	B.Sc. Ed.	University of Dar es Salaam, Tanzania	Biology/Chemistry

3. KEY COMPETENCIES

- Biodiversity Research & Conservation Planning
- Invasive Species Management & Ecological Restoration
- Environmental & Social Safeguards (World Bank Standards)
- Project Design, Writing, Fundraising, and Management
- GIS & Ecological Niche Modelling
- Scientific Communication & Publication
- Stakeholder Engagement & Policy Development
- Training, Teaching & Capacity Building

4. LEADERSHIP & PROFESSIONAL EXPERIENCE

Director – Southern Highland Wildlife Research Centre, Tanzania Wildlife Research Institute (TAWIRI) | 2024–Present

- Provide strategic leadership in wildlife and vegetation ecology research.
- Oversee multi-million shilling research and restoration projects across Tanzania.
- Represent Tanzania in international biodiversity policy and scientific fora.

Principal Researcher II – Wildlife Ecology

Tanzania Wildlife Research Institute | 2019–Present

- Lead research on invasive species, rangeland restoration, and ecological monitoring.
- Supervised MSc/PhD research and coordinated multi-disciplinary teams.

5. SELECTED FUNDED PROJECTS (as PI)

- Evaluation of Land Cover Dynamics & Management Implications – Ngorongoro Conservation Area (NCAA, 2018–2019) – TZS 97,083,600 (USD 42,768).
- Water Strategy for Ngorongoro Conservation Area (NCAA, 2018–2019) – TZS 133,000,000 (USD 88,636).
- Influence of Fire and Precipitation on Woody Vegetation Composition and Structure in the Serengeti Ecosystem (START/PACOM Grants for GEC Research in Africa, 2009) – USD 15,000.
- Vegetation Survey and Mapping in the Selous-Niassa Wildlife Corridor, Tanzania (2011) – TZS 37,000.
- Investigation of Traditional Use of Medicinal Plants in Northern Tanzania (Co-PI, 2018–2020) – Funded by the National Institute of Biological Resources (NIBR), South Korea – USD 90,000.
- REGROW Project Focal Person for TAWIRI (2019–2024) – Funded at USD 2 million by the Ministry of Natural Resources and Tourism (MNRT), Tanzania, as a soft loan from the World Bank Group.
- Co-Researcher – Indigenous Knowledge, Utilization and Biological Resources of Medicinal Plants in North-Western Tanzania (2023–Present) – Collaborative project with NIBR, funded at USD 19,752 (started May 2023).

6. PUBLICATIONS & BOOK CHAPTERS (Full list in Annex)

- Roy, H. E., Bukombe, J. K., et al. (2024). Curbing the major and growing threats from invasive alien species. *Nature Ecology & Evolution*.
- Bukombe, J. K., Mbago, F., Nkwabi, A., Kalugasha, J., Kavana, P., Okick, R., Kiwanila, S. I., Sanare, J., & Kindeketa, W. (in press). Angiosperms Diversity in East Africa: An Insight from the Tanzania Coast. In T. Pullaiah & A. Nkwabi (Eds.), *Biodiversity Hotspot of Coastal Forests of Eastern Africa* (Chapter 5). Apple Academic Press. In press.

- Bukombe, J. K., et al. (2024). Calotropis procera shrub intrusion on wildlife foraging rangelands. The Rangeland Journal.
- Bukombe, J. K., et al. (2022). Viability assessment of the Wami-Mbiki Game Reserve to Nyerere National Park wildlife corridor. Global Ecology & Conservation.
- Bukombe J, Senzota R.B., Fryxell J.M., Kittle A., Kija H., Hopcraft J.G.C., Mduma S., Sinclair A.R. (2015). *Do animal size, seasons and vegetation type influence detection probability and density estimates of Serengeti ungulates?* African Journal of Ecology, 54, 29–38. doi:10.1111/aje.12255.
- Bukombe J. Kija, Mweya C.N., Mwita M., Kija H., & Fyumagwa R. (2013). *Prediction of Suitable Habitat for Potential Invasive Plant Species Parthenium hysterophorus in Tanzania: A Short Communication.* International Journal of Ecosystem, 3, 82–89.

7. MEMBERSHIPS & CONTRIBUTIONS

- Lead Author – Global Invasive Species Assessment (IPBES, 2019).
- Contributor – National Biodiversity Strategy & Action Plan (2024).
- Contributor – National Invasive Species Strategy & Action Plan (2019).

8. AWARDS & RECOGNITION

- Recognition by TAWIRI for two international patents:
 1. Composition for Skin-Lightening and Wrinkle Improvement using Maerua edulis extract – KR102229943B1 (2021).
 2. Composition for Hair Growth Promotion or Hair Loss Inhibition using Lonchocarpus eriocalyx extract – KR102268761B1 (2021).

9. REFEREES

- Dr. Julius Keyyu – Director of Research, TAWIRI | Email: julius.keyyu@tawiri.or.tz
- Prof. Flora Magige – Principal, CoNAS, UDSM | Email: magige@udsm.ac.tz
- Dr. Charles Kilawe – Head of Dept., SUA | Email: ckilawe@sua.ac.tz

ANNEX 1 – FULL LIST OF PUBLICATIONS, BOOK CHAPTERS, & CONFERENCE PAPERS

A: PAPERS IN PEER REVIEWED JOURNALS

1. Mmassy, E., Ntiniwa, K., Lesio, N., Keyyu, J., Bukombe, J., Mjingo, E. E., ... & Marealle, W. (2024). Api-tourism potential of Southern Tanzania: a case study of villages around Ruaha and Udzungwa National Parks. Journal of Apicultural Research, 1-9. DOI: <https://doi.org/10.1080/00218839.2024.2430849>:
2. Kavana, P. Y., Bukombe, J. K., Wanzara, N., Reuben, E. P., Mbwambo, B. N., Dotto Keyyu, J., & Mjingo, E. E. (2024). Control of Calotropis procera Infestation in Ruaha National Park, Tanzania. Earth Sciences, 8(4), 282-288." DOI: 10.11648/j.earth.20241306.13
3. Bukombe, John, Pius Kavana, Wilfred Marealle, John Sanare, Norbert Wanzara, Wolfgang Sagari, Halima Kiwango, Joely Efraim, Godwell Ole Mein'gataki, and

- Alex Lobora, A. (2024). *Calotropis procera* (Apocynaceae) shrub intrusion on wildlife foraging rangelands in the Ruaha National Park. *The Rangeland Journal*, 46(1). <https://doi.org/10.1071/RJ23031>
4. Helen E. Roy, Anibal Pauchard, Peter J. Stoett, Tanara Renard Truong, Laura A. Meyerson, Sven Bacher, Bella S. Galil, Philip E. Hulme, Tohru Ikeda, Sankaran Kavileveetil, Melodie A. McGeoch, Martin A. Nuñez, Alejandro Ordonez, Sebataolo J. Rahlao, Evangelina Schwindt, Hanno Seebens, Andy W. Sheppard, Vigdis Vandvik, Alla Aleksanyan, Michael Ansong, Tom August, Ryan Blanchard, Ernesto Brugnoli, John K. Bukombe,, ... & Ziller, S. R. (2024). Curbing the major and growing threats from invasive alien species is urgent and achievable. *Nature ecology & evolution*, 1-8. <https://doi.org/10.1038/s41559-024-02412-w>
 5. Kimaro, J., Bukombe, J., Leweri, C., Kakengi, V., Ntalwila, J., Mwakatobe, A., ... & Keyyu, J. (2023). Sociocultural Factors Shaping Responses to Wildlife Crop-Raiding in Communities Adjacent to Protected Areas in Southern Tanzania. *Human Ecology*, 51(1), 165-172.
 6. Bukombe, J., Marealle, W., Kimaro, J., Kija, H., Kavana, P., Kakengi, V., ... & Lobora, A. (2022). Viability assessment of the Wami-Mbiki Game Reserve to Nyerere National Park wildlife corridor in southern Tanzania. *Global Ecology and Conservation*, 39, e02259.
 7. Mangewa, L. J., Ndakidemi, P. A., Alward, R. D., Kija, H. K., Bukombe, J. K., Nasolwa, E. R., & Munishi, L. K. (2022). Comparative Assessment of UAV and Sentinel-2 NDVI and GNDVI for Preliminary Diagnosis of Habitat Conditions in Burunge Wildlife Management Area, Tanzania. *Earth*, 3(3), 769-787.
 8. Lyamuya, R. D., Munisi, E. J., Hariohay, K. M., Masenga, E. H., Bukombe, J. K., Mwakalebe, G. G., ... & Fyumagwa, R. D. (2022). Patterns of mammalian roadkill in the Serengeti ecosystem, northern Tanzania.
 9. Pius Yoram Kavana, Ephraim Japhet Mtengeti, Anthony Zizimus Sangeda, Christopher Mahonge, John Bukombe, Stephen Nindi, Robert Fyumagwa (2022). Repercussions of Agro-Pastoralism on Soil Condition in Western Serengeti, Tanzania. *Earth Sciences*. Vol. 11, No. 3, 2022, pp. 130-141. doi: 10.11648/j.earth.20221103.19
 10. Kavana, P. Y., Bukombe, J. K., Kija, H., Nindi, S., Nkwabi, A., Lipende, I., ... & Fyumagwa, R. (2021). Interaction of Grassland Ecosystem with Livelihood and Wildlife Sustainability: Tanzanian Perspectives.
 11. Kavana, P. Y., Mtengeti, E. J., Sangeda, A., Mahonge, C., Fyumagwa, R., & John, Bukombe. (2021). How does agro-pastoralism affect forage and soil properties in western Serengeti, Tanzania? *Tropical Grasslands-Forrajcs Tropicales*, 9(1), 120-133.
 12. Smith, S. W., Graae, B. J., Bukombe, J., Hassan, S. N., Lyamuya, R. D., Jacob Mtweve, P., ... & Speed, D. M. (2020). Savannah trees buffer herbaceous plant biomass against wild and domestic herbivores. *Applied Vegetation Science*, 23(2), 185-196.
 13. Kija, H. K., Ogutu, J. O., Mangewa, L. J., Bukombe, J., Verones, F., Graae, B. J., ... & Nzunda, E. F. (2020). Land use and land cover change within and around the greater Serengeti ecosystem, Tanzania.
 14. Kija, H. K., Ogutu, J. O., Mangewa, L. J., Bukombe, J., Verones, F., Graae, B. J., ... & Nzunda, E. F. (2020). Spatio-temporal changes in wildlife habitat quality in the greater Serengeti ecosystem. *Sustainability*, 12(6), 2440.
 15. Sundsdal, A., Graae, B. J., Speed, J. D., Bukombe, J., Mtweve, P. J., Arneberg, M. K.,

- ... & Smith, S. W. (2020). Teatime in the Serengeti: macrodetritivores sustain recalcitrant plant litter decomposition across human-modified tropical savannahs. *Plant and Soil*, 456(1), 241-258.
16. Bukombe, J., A. Kittle, R. B. Senzota, H. Kija, S. Mduma, J. M. Fryxell, F. Magige, C. Mligo and A. R. Sinclair (2019). "The influence of food availability, quality and body size on patch selection of coexisting grazer ungulates in western Serengeti National Park." *Wildlife Research*, DOI:
 17. Bukombe, J., S. W. Smith, H. Kija, A. Loishooki, G. Sumay, M. Mwita, G. Mwakalebe and E. Kihwele (2018). "Fire regulates the abundance of alien plant species around roads and settlements in the Serengeti National Park." *MANAGEMENT OF BIOLOGICAL INVASIONS* 9(3): 357-367
 18. Bukombe, J., A. Kittle, R. Senzota, S. Mduma, J. Fryxell and A. R. Sinclair (2018). "Resource selection, utilization and seasons influence spatial distribution of ungulates in the western Serengeti National Park." *African Journal of Ecology* 56(1): 3-11
 19. Kavana, P. Y., C. P. Mahonge, A. Z. Sangeda, E. J. Mtengeti, R. Fyumagwa, S. Nindi, B. J. Graae, M. R. Nielson, B. John and J. Keyyu (2017). Panorama of agro-pastoralism in western Serengeti: A review and synthesis. *Development* 29: 10.
 20. Bukombe J, Senzota R.B., Fryxell J.M., Kittle A., Kija H., Hopcraft J.G.C., Mduma S., Sinclair A.R. (2015). Do animal size, seasons and vegetation type influence detection probability and density estimates of Serengeti ungulates? *African Journal of Ecology*, 54, 29–38. doi:10.1111/aje.12255.
 21. Bukombe J. Kija, Mweya C.N., Mwita M., Kija H., & Fyumagwa R. (2013). Prediction of Suitable Habitat for Potential Invasive Plant Species *Parthenium hysterophorus* in Tanzania: A Short Communication. *International Journal of Ecosystem*, 3, 82–89.

B: BOOK CHAPTERS

1. Pius Yoram Kavana, Bukombe John Kija, Emmanuel Pagiti Reuben, Ally Kiyenze Nkwabi, Baraka Naftal Mbwambo, Simula Peres Maijo, Selemani Rehani Moshi, Shabani Haruna Matwili, Victor Alexander Kakengi and Stephen Justice Nindi. *Plant Diversity in Agro-Pastoral Grasslands of Tanzania. In Vegetation Index and Dynamics - Methodologies for Teaching Plant Diversity and Conservation Status. Intech Open, Rijeka, (2024). Editors, Dr. Eusebio Cano Carmona and Dr. Ana Cano Ortiz. Doi: 10.5772/intechopen.1003824. <https://doi.org/10.5772/intechopen.1003824>.*
2. Christina F. Ngereza, John K. Bukombe, Immaculate C. Kileo, Sood A. Ndimuligo, Pius Y. Kavana, Ally K. Nkwabi, Hamza K. Kija, and Neduvoto P. Mollel, (2023) *Botanical Gardens in Tanzania and Their Role in Plant Conservation. In: Botanical Gardens and Their Role in Plant Conservation. DOI: 10.1201/9781003282150-9*
3. Kavana, Pius Yoram, John Kija Bukombe, Hamza Kija, Stephen Nindi, Ally Nkwabi, Iddi Lipende, Simula Maijo et al. "Interaction of grassland ecosystem with livelihood and wildlife sustainability: Tanzanian perspectives." In *Grasses and Grassland-New Perspectives. IntechOpen, 2021..*
4. Bukombe, J. K., Nkwabi, A. K., Mangewa, L. J., Sweke, E. A., Kavana, P. Y., Liseki, S. D., & Kija, H. H. (2021). Alien Invasive Species in Tanzania. *Invasive Alien Species: Observations and Issues from Around the World*, 1, 263-290.
5. Pius Yoram Kavana, John Kija Bukombe, Hamza Kija, Stephen Nindi, Ally Nkwabi, Iddi Lipende, Simula Maijo, Baraka Naftali, Victor M. Kakengi,

- Janemary Ntalwila, Sood Ndimuligo and Robert Fyumagwa, Interaction of Grassland Ecosystem with Livelihood and Wildlife Sustainability: Tanzanian Perspectives, Grasses and Grassland - New Perspectives, IntechOpen,
6. Nkwabi, A. K., Bukombe, J., Maliti, H., Liseki, S., Lesio, N., & Kija, H. (2018). An overview of biodiversity in tanzania and conservation efforts. *Global Biodiversity*, 295-340.
 7. Nkwabi, Ally K., John Bukombe, Honori Maliti, Stephen Liseki, Nicephor Lesio, and Hamza Kija. "An overview of biodiversity in tanzania and conservation efforts." *Global Biodiversity* (2018): 295-340.
 8. Bukombe, J., M. Nelson, M. Machoke, L. Richard, M. Emilian, M. H. Shombe and B. J. Graae (2017). Distribution of alien Plant Species. In: Northern Serengeti Road Ecology. I. M. M. Editors: Robert D. Fyumagwa, Janemary Ntalwila & Eivin Røskft. Fagbokforlaget, Kanalveien 51: pp 308-324.
 9. Richard Lyamuya, Elisa K. Hamphil, John Bukombe, Nzunda Mawazo, M. Machoke, M. Emilian Mayemba, Shombe N. Hassan and Bente J. Graae (2017). Ethnobotany. In: Northern Serengeti Road Ecology. I. M. M. Editors: Robert D. Fyumagwa, Janemary Ntalwila & Eivin Røskft. Fagbokforlaget, Kanalveien 51: pp 292-307.
 10. Bukombe, J., M. Nelson, M. Machoke, L. Richard, M. Emilian, M. H. Shombe and B. J. Graae (2017). Distribution of alien Plant Species. In: Northern Serengeti Road Ecology. I. M. M. Editors: Robert D. Fyumagwa, Janemary Ntalwila & Eivin Røskft. Fagbokforlaget, Kanalveien 51: pp 308-324.
 11. Richard Lyamuya, Elisa K. Hamphil, John Bukombe, Nzunda Mawazo, M. Machoke, M. Emilian Mayemba, Shombe N. Hassan and Bente J. Graae (2017). Ethnobotany. In: Northern Serengeti Road Ecology. I. M. M. Editors: Robert D. Fyumagwa, Janemary Ntalwila & Eivin Røskft. Fagbokforlaget, Kanalveien 51: pp 292-307.
 12. Bukombe, J.K., Nkwabi, A.K., Mangewa, L.J., Sweke, E.A., Kavana, P.Y., Liseki, S.D., & Kija, H.H. (2021). Alien Invasive Species in Tanzania. In *Invasive Alien Species: Observations and Issues from Around the World*, 1, 263–290.
 13. Bukombe, J., Nelson, M., Machoke, M., Richard, L., Emilian, M., Shombe, M.H., & Graae, B.J. (2017). Distribution of Alien Plant Species. In: Northern Serengeti Road Ecology. Editors: Robert D. Fyumagwa, Janemary Ntalwila & Eivin Røskft. Fagbokforlaget, Kanalveien 51: pp 308–324.

C: SCIENTIFIC CONFERENCE PAPERS

1. Rajab Mikole, Richard D. Lyamuya, Evaline J. Munisi, Kwaslema M. Hariohay, Emmanuel H. Masenga, John K. Bukombe, Grayson G. Mwakalebe, Maulid L. Mdaki, Ally K. Nkwabi, and Robert D. Fyumagwa (2021). Wild mammal roadkill in the Serengeti Ecosystem, Northern Tanzania. In *proceedings of the 13th TAWIRI Scientific Conference, 2nd-4th December 2021* pp. December 6-8, 2021 Arusha International Conference Centre, ARUSHA , TANZANIA
2. John Bukombe, Angela Mwakatobe, Edmund Kayombo, Joseph Otieno, Daniel Sitoni, Jaeho Lee, Changkun Lim, Jaeshin Kang and Julius Keyyu (2017). A survey of medicinal plants used by indigenous people in northern Tanzania. *Proceedings of the eleventh TAWIRI scientific conference, 6th – 8th December 2017*, Arusha International Conference Centre, Tanzania, Tanzania Wildlife Research Institute.
3. Richard D. Lyamuya, Emmanuel Masenga, John Bukombe, Grayson Mwakalebe, Maulid Mdaki, Ally J. K. Nkwabi and Robert Fyumagwa (2017). Status, patterns and compositions of wildlife road kills on gravel road networks in serengeti

ecosystem, Tanzania. Proceedings of the eleventh TAWIRI Scientific Conference, 6th – 8th December 2017, Arusha International Conference Centre, Tanzania, Tanzania Wildlife Research Institute.

4. John Bukombe, Hamza Kija, Asheeli Loishooki, Glory Sumay, Machoke Mwita, Grayson Mwakalebe and Emilian Kihwele (2015). Distribution and Causes of Alien Plant Species in Serengeti National Park. Proceedings of the tenth TAWIRI Scientific Conference, 2nd–4th December 2015, at Naura Springs Hotel, Arusha.