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Name	Dr. Stephen F. Sikolia
Qualification	PhD, Plant Ecology
Picture(JPEG or better)	
Department	Botany
Email:	stefedha@gmail.com
Postal Address:	P.O. BOX 82, WEBUYE or DEPARTMENT OF BOTANY MASENO UNIVERSITY PRIVATE BAG <u>MASENO</u>
Brief Bio	<p>UNTRAINED TEACHER, Lwandeti Secondary School and appointed Deputy Principal JUNE, 1986 – SEPT., 1986 Graduate teacher, Chebara secondary School and appointed Head of Science AUG., 1989 – MAY, 1990 Graduate assistant grade D, Department of Botany, Kenyatta University Researcher, tissue culture of Indigenous/Agricultural plants of economic importance : hops, macadamia, maize and groundnuts.</p> <p>JAN., 1992 – MARCH, 2009 Lecturer, Department of Botany, Maseno University JUNE, 1995 – DEC., 1996 researcher, Development Partners working on the biological diversity of riparian ecosystems and endangered plant species in Kenya.</p> <p>JAN., 2000 – DEC. 2006 RESEARCHER Biodiversity of the semi –arid, arid, and mountainous</p>

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	<p>dicot germplasm in different ecoclimatic habitats in Kenya Δ^{13} Ratios of the Centrospermeae dicot species of the arid and saline ecosystems in Kenya Carbon dioxide compensation points of some dicots of Centrospermeae species.</p> <p>JAN., 2008 – 2014 RESEARCHER SIGNIFICANCE OF ADAPTATION OF THE CROP PLANTS BIOLOGICAL DIVERSITY OF THE MARGINALIZED POPULACE AND THEIR UNIQUE FLORA FOR DOCUMENTATION AND ADOPTION IN THE NATIONAL POLICY.</p> <p>APRIL, 2009 – TODATE SENIOR LECTURER, GRADUATE SUPERVISOR, EXAMINER AND RESEARCHER, DEPARTMENT OF BOTANY, MASENO UNIVERSITY</p> <p>FEB., 2018 –TODATE NOV., 2018 – TODATE NRF PRINCIPAL RESEARCHER Member of inspection and acceptance committee for NRF equipment in the botany and horticulture department.</p>
<p>Current Research: We also need past research activities</p>	<ul style="list-style-type: none"> • Female gametophyte studies in Angiosperms • Tissue culture studies in Zea mays, Macadamia and Podostemaceae • Photosynthetic system (C₃, CAM and C₄ studies) • Signifiiances of adaptation of the crop plants biological diversity of the marginalized populace and their unique flora for documentation and adoption in the national policy. • Biodiversity of Kakamega district : Agricultural plantas and Medicinal plants of Ikolomani division, Kakamega district, Kenya • NRF Principal researcher cataloguing biological diversity especially the endangered, rare and vulnerable germplasm) in their ecological and least disturbed habitats in western region, Kenya. • Researcher : Developing tissue culture hybridization paradism with view to achieve genetic and somatic hybridization of some c₃ and c₄ syndrome of selected cultivars to improve their photosynthetic performance and productivity. • NRF PRINCIPAL RESEARCHER FOR THE PROJECT ENTITLED: “Effect of climate change and anthropogenic processes on the vegetation change and primary productivity patterns along altitudinal gradient in western region”.

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Publications:

PUBLICATIONS : 1990 – 2023

Sikolia, S., 1990 : The female gametophyte in two genera of Podostemaceae. **M.Sc. Thesis**

Olembo, N., Ngaira, E. and Sikolia S., 1995 : Focus on the medicinal and agricultural plant. DEPA, 1:1-19

Olembo, N., Ngaira, E. and Sikolia, S., 1995 : Medicinal and Ikolomani Division, Kakamega District. **Signal**

Press Publishers, Kenya. Pp. 1- 280.

Sikolia, S., 2005 : Screening some parameters of the C₃ and C₄ species influencing their distribution along the altitudinal gradient in the arid and semi-arid ecosystems of western Kenya. **PH.D. Thesis, Maseno University, Kenya**

Sikolia, S., Beck, E., Kinyamario, J.J., Onyango, J.C. and Ouma, G., 2008 : $\delta^{13}\text{C}$ values of the Centrospermeae species and their ecological implications in the semi-arid conditions. **International Journal of Botany, 4 (4): 421 – 429.**

Sikolia, S. and Ochora, P., 2008: Female gametophyte in Tristichoideae (Podostemaceae): Re-investigation. **Journal of Biological Sciences, 8(7): 1158 – 1165.**

Sikolia, S. and Onyango J. C., 2009: Female gametophyte in two Kenyan genera of Inversodicraea – (Podostemaceae). **Research Journal Botany, 4(1): 29 –39.**

Sikolia, S., Beck, E. and Onyango, J. C., 2009 : Carbon dioxide compensation points of some dicots of the Centrospermeae species and their ecological implications for agroforestry. **International Journal of Botany, 5(1): 6- 75.**

PUBLICATIONS AFTER PROMOTION IN 2009 TO SENIOR LECTURER

Sikolia, S., Onyango, J.C., Beck, E. and Kinyamario, J. I., 2009: The distribution of the C₃ and C₄ photosynthetic dicot species of the Centrospermeae along the altitudinal gradient in

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Western region, Kenya. **International Journal of Botany**, 5(1): 47 – 57

Jomo, O. M., Netondo, G. W., Okello, H. O., Fedha, S. S. and Musyimi, D. M., 2014: Physiology of African nightshades (*Solanum scabrum* Mill. and *Solanum villosum* Mill) as influenced by soil water deficit. **Nature and Environment**, 19(2): 137 – 146

Jomo, O. M., Netondo, G.W., Okello, H.O., Fedha, S. S. and Musyimi, D. M., 2014 : Effects of water deficit on the biochemical content of African nightshades (*Solanum scabrum* Mill, and *Solanum villosum* Mill.) **International Journal of Biological Sciences**, 1(2): 65 – 74.

Jomo, O.M., Netondo, G.W., Okello, H.O. Fedha, S.S and Musyimi, D. M., 2014 : Growth of selected African nightshades (*Solanum scabrum* Mill. and *Solanum villosum* Mill.) under water conditions. **International Journal of Biological Sciences**, 1(2): 97 – 106

Wabomba, P., Sikolia, S.F., Wanjala, M. and Wanjere, D., 2015 : The implications of autonomization on service delivery in public hospitals in Kenya. **Journal of Pharmacy and Biological Sciences**, 10(4): 48 – 55.

Sikolia, S. F., 2015: Podostemaceae Embryological Question: Is the antipodal cell in the organized female gametophyte resolved? **Journal of Research in Agriculture and Animal Sciences** 3(6): 1-7.

Wabomba, P. and Sikolia, S. F., 2015: Research in the quality of service delivery in public hospitals, Kenya. **Journal of Pharmacy and Biological Sciences**, 10(6): 1-7.

Sikolia, S.F. and Onyango, P., 2015: Numerical assessment of variable importance in palynological characterization of some *Indigofera* (Linn) species at Maseno University Herbarium. **Journal of Research in Agriculture and Animal Sciences**, 3(7): 11 – 17

Kosasia, A. J. and Sikolia, S., 2015: Biology students' perceptions

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towards evolution: A case of teaching techniques and influence of learning in Kakamega Central Sub County, Kenya. **Journal of Research in Humanities and Social Science**, 3(10): 33 – 41

Kosasia, A. J. and Sikolia, S., 2015: Biology students' religious beliefs: A hidden variable learning of evolution. **Journal of Research in Humanities and Social Science**, 3(11): 43 – 48.

Sikolia, S.F., 2016: Differentiation of the C₃ and C₄ dicot (Centrospermeae) species along the altitudinal–aridity gradient and their ecology implications in bioproductivity paradigm in Kenya. **Journal of Research in Agriculture and Animal Sciences**, 4(4): 1 – 08.

Sikolia, S.F., 2016: Phylogenetic distribution of the C₃ and C₄ syndrome in the Centrospermeae (dicot) species. **Journal of Research in Agriculture and Animal Sciences**, 4(4): 9 – 15.

Sikolia, F.M. and Sikolia, S.F., 2016: Influence of strengthening of mathematics and Science of education (SMASSE) project: Performance and trend in the mean Score of biology in Kakamega North Sub-county, Kenya. **Journal of Research and Method in Education**, 6(3): 78 – 102

Sikolia, F.M., Toili, W.W., Sikolia, S.F. and Owiti, D.S.O., 2016: Extent use of instructional strategies in teaching biology in public secondary schools, Kakamega North sub-county, Kenya. **Journal of Research and Method in Education**, 6(3): 60 – 77.

Sikolia, S. F. and Omondi, S., 2017: Checklist of plants in the University Botanic Garden of Maseno and their significances to the society. **Journal of Pharmacy and Biological Sciences**, 12(1): 27 – 49.

Sikolia, F. M., Toili, W.W., Owiti, D.S.O. and Sikolia, S.F., 2017: Limiting factors influencing implementation of SMASSE (ASEI and PDSI) instructional strategies in teaching

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biology in secondary schools in Kakamega North Sub-county, Kenya. **Journal of Research and Methods in Education, 7(1): 69 - 82.**

Sikolia, S.F., 2017 : A critical review of the female gametophyte in the Podostemaceae- Past, Present and Future. **Journal of research in Agriculture and Animal Sciences, 4(10): 12 - 28.**

Sikolia, S.F. and Omondi, S., 2017 : Phytochemical analysis of some selected plants and families in the university botanic garden of Maseno, Kenya. **Journal of Pharmacy and Biological Sciences, 12(4) Ver. II: 31-38.**

Sikolia, S.F., 2017 : The status of scientific researches and politics in the world paper presented during the DAAD Annual Conference: The role of Higher Education in the electoral process and Democratization of Politics in Kenya held on the 17th – 20th, June, 2017, at Kisumu Hotel, Kisumu, Kenya.

Sikolia, S.F., 2017 : Ecological implications of the $\delta^{13}\text{C}$ values of plant species growing in natural environment, greenhouse and plant respired carbon dioxide (captured as carbonate). **Journal of Pharmacy and Biological Sciences, 12(4) Ver. II: 51-58.**

Sikolia, S.F., 2017 : Influence of climatic factors on the $\delta^{13}\text{C}$ values of the C_3 , C_4 and CAM dicot species (vegetation) of the Centrospermeae along altitudinal gradient in Western region of Kenya. **Journal of Research in Environmental and Earth Sciences, 3(5): 34 – 46.**

Sikolia, S.F., 2018 : Adaptive strategies of the Centrospermeae species with different photosynthetic systems in the semi-arid and saline areas in Mt. Kulal – Mt. Elgon habitats in Kenya. **Journal of Research in Agriculture and Animal Science, 5(1): 15 – 27.**

Sikolia, S.F., 2018 : Medicinal plants of Kakamega forests and their consistency applications: opportunities and challenges to-date. **Journal of Pharmacy and biological sciences, 13(1)**

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Ver.VI: 48-54

Sikolia, S.F. and Ayuma, E., 2018: Allelopathic effects of *Eucalyptus saligna* on germination growth and development of *Vigna unguiculata* L. Walp. **Journal of Environmental Science, Toxicology and Food Technology, 12(3):15 – 24.**

Onyango, P., Nyunja, R., Sikolia, S.F. and Opande, G., 2019: Seasonal availability and floral calendar of *Apis mellifera* nectar and pollen forage in Eastern Mau. **International Journal of Life Sciences Research, 7(1): 88-97.**

Onyango, P., Nyunja, R., Opande, G. and Sikolia, F.S., 2019: Inventory, reward value and diversity of *Apis mellifera* nectariferous and polleniferous forage in Eastern Mau forest, Kenya. **International Journal of Scientific and Research Publications, 9(2): 55-65.**

Philip Onyango, Regina Nyunja, George Opande and Stephen Sikolia Fedha, 2019: Melissopalynological determination of frequency of occurrence and Shannon weaver index of pollen types, *Apis mellifera* l. niche amplitude, and geographical origin of Ogiek honeys in eastern Mau, Kenya. **International Journal of Research and Analytical Reviews, 6(1): 515-522**

Sikolia, S.F., 2023: Effects of biofertilizer on seedling growth and physiological response of *Solanum nigrum*. **Journal of Environmental Science, Toxicology and Food Technology.** (Accepted).

Sikolia, F.S. and Osera, B., 2023: Effect of sowing depth on seed germination and seedling growth of sorghum (*Sorghum bicolor* L.) Variety *Serena*. **Journal of Agriculture and Veterinary Science** (Accepted).

Sikolia, F.S. and Muroño, D., 2023: Mt. Elgon ecosystem biodiversity status, ecological services and emerging issues in Kenya. (In Press)

TEXT BOOK PUBLICATION

Olembo, N., **Fedha, S.S.** and Ngaira, E., 1995 : Medicinal and agricultural plants of Ikolomani Division, Kakamega District. **Signal Press Publishers, Kenya. Pp. 1-280.** (A text that is useful

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	<p>for researches in the scientific world, undergraduate students of Taxonomy, ethnobotany and Medicinal/Herbalists).</p>
Attachment	<p>EDUCATION KENYATTA UNIVERSITY NOV., 1987 – DEC., 1989, M.SC (BOTANY) KENYATTA UNIVERSITY KENYATTA UNIVERSITY NOV., 1987 – DEC., 1989, PH.D. PLANT ECOLOGY/ECOPHYSIOLOGY, MASENO UNIVERSITY, 2002 – 2005</p> <p>RESEARCH EXPERIENCE</p> <ul style="list-style-type: none">• RESEARCH on the Tissue culture of Indigenous/agricultural plants of economic importance : hops, macadamia, maize and groundnuts.• RESEARCHER, Development Partners working on the biological diversity of riparian ecosystems and endangered plant species in Kenya.• Research in the biodiversity of the semi –arid, arid, and mountainous dicot germplasm in different ecoclimatic habitats in Kenya• Δ^{13} Ratios of the Centrospermeae dicot species of the arid and saline ecosystems in Kenya.• Carbon dioxide compensation points of some dicots of Centrospermeae species.• Research significance in the adaptation of the crop plants.• Biological diversity of the marginalized populace and their unique flora for documentation and adoption in the national policy.• NRF PRINCIPAL RESEARCHER for the project entitled : “Effect of climate change and anthropogenic processes on the vegetation change and primary productivity patterns along altitudinal gradient in western region”. <p>TEACHING EXPERIENCE Two (2) years of Teaching Botany, Kenyatta university; 30 years in teaching botany, plant ecology and related courses, Maseno University. 2 years of teaching botany Masinde Muliro university of science and technology</p>

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(Post Graduate Lecturer).

UNTRAINED TEACHER : Lwandeti Secondary School and appointed Deputy Principal

JUNE, 1986 – SEPT., 1986 : Graduate teacher, Chebara secondary School and appointed Head of Science

AUG., 1989 – MAY, 1990 : Graduate assistant grade D, Department of Botany, Kenyatta University

JAN., 1992 – MARCH, 2009 : Lecturer, Department of Botany, Maseno University

APRIL, 2009 – TO-DATE : Senior Lecturer, Graduate Supervisor, Examiner and Researcher, Department of Botany, Maseno University.

PROFESSIONAL MEMBERSHIP

Grantee member of the African Academy of Sciences

Member of Kenya DAAD scholars association

Ecosystem Based Adaptation for Food security Assembly (EBAFOSA)

Member of International Consortium of Educational Development (IECD)

Member of Association for Faculty Enrichment in Learning and Teaching (AFELT)

Member of Kenya Wildlife Association

Member of Scientific Organization Development

Member of the Indigenous Species Conservation and Preservation

Member of NEMA

Member of African Social Policy Association

Member of the Maseno University Retirement Benefits Scheme

SKILLS AND TRAINING

Field Spec Hand Held 4 Spectroradiometer techniques, Spectrophotometric techniques, rotary microtome sectioning, Infra-Red Gas Analysis, Elemental analyzer for Dumas Combustion and hydrological analysis, Mass Spectrometry whole, Histochemical staining techniques, Digital camera photography meiotic

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autoradiography, Fractional distillation techniques in Botany, T-Test, ANOVA, regression coefficient analysis, sigma plot package, Chi Square Test, Tissue Culture studies, PCR techniques, Correlation analysis, Statistical Analysis, Pearson's Correlation, Gel Electrophoresis, Standard Deviation, Correlation Coefficient, Frequency Distribution, Microsoft Excel Data Analysis, Logistic Regression, Spearman Correlation, Genetics Herbarium management, Laboratory ISO Standards, examination management on e-learning platform, Multiple Regression, Multivariate Analysis and Isotopic milling and data analysis.

LEADERSHIP EXPERIENCE

1981-1982 : UNTRAINED TEACHER, Deputy Principal, Lwandeti Secondary School

JUNE, 1986 – SEPT., 1986 Head of Science Graduate teacher, Chebara secondary School

JUNE, 1995 – DEC., 1996 Researcher, Development Partners - NGO

Member of the World Bank working committee, Department of Botany, Maseno University

Acting Head of Department of Botany, Maseno University

Examination and Time table officer, Department of Botany, Maseno University

Senior Examiner and Supervisor of Graduate Students

Chairman, School of Physical Science and Biological Sciences Postgraduate Studies Committee (2012- 2015)

Chairman, Departmental Postgraduate Studies Committee (2015)

Internal Examiner of Postgraduate Students (Master Science (Botany), Doctor of Philosophy (Botany) to-date.

School of Representative of School of Physical and Biological Sciences to School of Graduate Studies

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Member of School of Graduate Studies Board of Examiner (to-date)

Vice Chair Person, DAAD Maseno University Chapter.

Chairman of Departmental Laboratory and Equipment Facilities (May, 2016 – to-date).

Feb., 2018 –To-date NRF Principal Researcher

Matsakha SDA Church Elder, Kakamega County

CONFERENCES AND WORKSHOPS : RECENT CONFERENCES AND WORKSHOPS/SEMINAR ATTENDED

- Virtual 8th BA Istanbul Conference : Driving Digitization Designing the Future to held on 16th -17th February, 2023, Istanbul, Turkey.
- Virtual BA Istanbul Conference : Business Data Analytics : A Decision-Making Paradigm held in Istanbul, Turkey, 2022.
- The 2nd Annual KDA/KWA Informal Diaspora Social & Business Networking Event held on the 5th Jan., 2023 at Bomas of Kenya (Utamaduni Restaurant), Nairobi, Kenya.
- **Virtual ADEA 2022 Triennale** : “Reflecting on the impact of COVID-19 on Africa’s educational systems, and how to build resilience to sustain the development of skills for the continent and beyond”, held on the 19th to 21st October, 2022, Le Meridien Hotel, Mauritius.
- **Virtual Webinar sponsored by Malvern Panalytical and Spectra Company:** Successful elemental analysis for the pharmaceutical industry using benchtop XRF webinar: “**Elemental Analysis Masterclass 1 - the theory of X-ray Fluorescence (XRF), Epsilon 1- Small, powerful and portable XRF analyzer, Theory of XRF, getting acquainted with the principles (booklet)**”, by Mr. Lieven Kempnaers held on the Wednesday, 28th September, 2022, 15:30 - 16:30 BST, Lelyweg 1, 7602 EA Almelo, The Netherlands.
- **Virtual AFELT Webinar AFELT RESEARCH MENTORSHIP**

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ECOSYSTEM IN INSTITUTIONS OF HIGHER LEARNING”, held on the 21st Sept, 2022 10:00 AM - 12:00 PM Nairobi, Kenya.

- **18th International Congress on Photosynthesis Research Dunedin, New Zealand** held on the 31st July to 5th August, 2022 at the Dunedin Conference Centre, Dunedin New Zealand and online.
- **Virtual ADEA Webinar** on the Status of STEM Education in Secondary Schools in Africa & Introduction to Interactive Simulations in Teaching & Learning 20th July 2022 | 2:30 - 3:55 pm EAT
- **Virtual ICQN-HESR Webinar** to Launch the New Strategic Framework (2023-2027) of the ADEA Inter-Country Quality Note on Higher Education and Scientific Research (ICQN-HESR) held on the Thursday 7th July 2022 from 12:00 to 13:30 PM GMT.
- **Virtual DAAD Conference** : 2nd East African Endometriosis Conference (EAEC, 2022) held on the 22nd - 24th June, 2022 at the University of Nairobi, Nairobi, Kenya, Kenya.
- **Virtual Webinar on the Plant Physiology Measurements** with LI-COR : Facilitate and enhance your plant physiology research by Jason Hupp, Principal Scientist, introduces new features of the LI-600 and LI-6800, on the LI-600 Porometer/Fluorometer high-speed sampling and the LI-6800 Portable Photosynthesis System on the detailed data measurements of the numerous aspects of plant physiology and photosynthesis held on the Wednesday, June 22, 2022 10:00 AM CDT & 8:00 PM CDT.
- **Virtual DAAD Conference** : Annual General Meeting of the Kenya DAAD Scholars Association (KDSA) held on Tuesday, 14th June 2022 Virtual Ly, starting from 2.00pm.
- **Virtual DAAD Conference** : The 4TH CAIROBI Talks Decolonizing Knowledge – Amplifying an African Identity held on the 6th – 8th June, 2022, a Collaboration between the DAAD Regional Offices Cairo and Nairobi.

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- **Virtual Grant Writing Workshop, 2022 hosted by** East African Kidney Institute (EAKI) - **University of Nairobi** via the ZOOM platform held on the 11th -13th April, 2022.
- **EASTECO Sponsored AuthorAID** Massive Open Online Course (MOOLC) (8 Weeks) in Research Writing and Proposal Writing In The Sciences Scheduled to Start on the 7th September, 2021.
- **KENYA INDUSTRIAL PROPERTY INSTITUTE (KIPI) TECHNOLOGY AND INNOVATION SUPPORT CENTRE INITIATIVE SPONSORED:** “Launch of 1st Maseno TISC Centre and IP Training held on the 18th to 20th august 2021, Maseno University Board Room, Maseno University”, MASENO, KENYA.
- **Virtual High-Level Policy Dialogue conference** on “*Rethinking the role of Skills Development in future work and lifelong learning, in light of digitalization and 4IR*” sponsored by the Association for the Development of Education in Africa (ADEA), in partnership with the African Development Bank Group (AfDB) and in close collaboration with the World Bank and the German Development Cooperation Agency Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH to be held on the 8th July 2021, from 12:00pm to 2:30pm GMT.
- **Virtual KDSA International Conference:** “*Mitigating the impact of COVID-19 and Future Pandemics: Role of Academia*”, held on the 15th to 18th June, 2021 at Masinde Muliro University of Science and Technology (MMUST), Kakamega, Kakamega County, Kenya.
- **Virtual Training Conference:** “*Intellectual Property and Technology Innovation Service*”, organized by Karatina University and Kenya Industrial Property Institute on the 3rd June, 2021.
- Association for Faculty Enrichment in Learning and Teaching: Research Webinar III Programme: Transforming how we Develop Research Capacity in Institutions of Higher Learning (*Teaching Research Methods Remotely*), held on the Wednesday, 26th May, 2021, Worldwide.
- First East African Endometriosis Conference: “*Campaigning for better awareness, management and research on endometriosis in*

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East Africa", sponsored by German Academic Exchange Service (DAAD) and German Society of Women Health in Development Cooperation (FIDE), held on the 19th -21st May, 2021 at The University of Nairobi, Nairobi, Kenya.

- National Research Fund (NRF) Conference: “*Research Capacity Training Programme*”, sponsored by National Research Fund, Ministry of Education held on the 11th May -14th May, 2021 at Kisumu Hotel, Maseno University, Kisumu, Kenya.
- Virtual Training Workshop: Partnership for Pedagogical Leadership in Africa (PEDAL) Online “*Technology for Transformative Pedagogy*”, sponsored by Partnership for African Social and Governance Research, held on the 8th – 18th May, 2021, 25th -31st May, 2021 and 8th – 14th June, 2021.
- A Collaborative Virtual Workshop: Best Practice and Innovative Approaches to Peer Review hosted by Eider Africa, Training Centre in Communication (TCC Africa), AfricArxiv and PRereview, sponsored by Wellcome Trust, held on the 29th May, 2021, 14th May, 2021 and 27th May, 2021.
- Maseno University Workshop: “Introduction to the Kenya Research Information System (KRIS)”, held on the 19th February 2021, Maseno University, Kisumu, Kenya.
- Multidisciplinary thematic research proposals workshop: “In the thematic area of climate change, adaptation and mitigation/agriculture and food security”, held on the 17th December 2020, Kisumu Hotel, Maseno University, Kisumu, Kenya, sponsored by Maseno University in Collaboration with the County Governments in the LREB region and Kisumu County in particular.
- Virtual Teaching Techniques it is called "Training of EAC – ICT university staff on Media held on the 1st – 15th, December, 2020, supported Didactics" supported by Inter University Council for East Africa (IUCEA).
- Natural Products Research Network for Eastern and Central Africa – Kenya (NAPRECA –K) Conference: “Utilization of natural products for the betterment of the livelihood of mankind in the face of unexpected disasters” sponsored by NAPRECA-K held on the 31st July 2020, 14:00 –17:00, Nairobi time (GMT + 3):
<https://conference.ke/zPFMFStYZf1p/>

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- The KDSA (Dedan Kimathi University of Technology (DeKUT) Chapter Virtual Workshop: “Management of internationalization for young university academic and administrative staff ” sponsored by DAAD held on the 20th – 24th July, 2020.
- Webinar Conference: "Knowledge Economy in a Rapid Transition" sponsored by Research and Programmes Development Anchor held on the Saturday, May 9, 2020.
<https://us02web.zoom.us/j/84815276949?pwd=ZU1RY0pkb2lzcENyMkZPQVlrT3ovZz09>
- The KDSA (MMUST University Chapter) Conference: “Exploring Biophysics Diversity for sustainable Industrial and Economic Development”, sponsored by DAAD held on the 3rd -4th, July 2019 at Sirikwa Hotel, Eldoret, Kenya, Africa.
- 1st Great Lakes and Catchment Management Conference (1st GLACAM) “Protecting Water and Land Resources in Africa for Climate Change Adaptation and Improved Livelihoods”, to be held on the 5th-7th, June, 2019, at Water Resource Institute, Entebbe, Uganda.
- The KDSA (Technical University of Kenya Chapter) workshop: “Graduate Supervision of the 21st Century Workshop”, sponsored by DAAD held on the 22nd -23th, May, 2019 at Sirikwa Hotel, Eldoret, Kenya, Africa.
- KDSA Annual Conference: “The Role of Universities and Research Institutions in Kenya’s Big Four Agenda”, sponsored by DAAD held on the 12th -14th, May 2019 at Sirikwa Hotel, Eldoret, Kenya, Africa.
- The KDSA (Moi University Chapter) workshop: “Scientific Data Collection, Data Analysis and Quality Report writing”, sponsored by DAAD held on the 9th -10th, May 2019 at Sirikwa Hotel, Eldoret, Kenya, Africa.
- DAAD Workshop on the Research Administration and Grant Writing Workshop sponsored by DAAD held on the 12th -14th march 2019 at the school of physical sciences boardroom, Chiromo Campus, University of Nairobi, Nairobi, Kenya.

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- Kenya Chemical Society Workshop on gaps and lapse in laws and policies for chemical managements systems towards responsible consumption and production in Kenya held on the 7th – 8th March, 2019 at the Kisumu Hotel, Maseno University, Kisumu, Kenya.

PRESENTATION AT CONFERENCE AND WORKSHOPS

Sikolia, F.S., 2019 : *Case of policy issues in the society and Higher Education in Kenya* paper presented during the DAAD-cum-Kenya Chemical Society Workshop : “Gaps and lapse in laws and policies for chemical management systems towards responsible consumption and production in Kenya”, held on the 7th-9th march, 2019 at Kisumu Hotel, Kisumu, Kenya.

Sikolia, S.F. and Nzioka, M.N., 2018 : *Effects of biofertilizer on seedling growth and physiological response of Solanum nigrum* paper presented during the Preconference and Training and an International conference : “Science, Technology and Innovation for Sustainable Development in Dryland Environments”, held on the 19th-23rd, 2018 at the SEKU University and UMMA University, Kenya, Africa.

Sikolia, S.F., 2018 : *Allelopathic effects of Eucalyptus saligna on germination growth and development of Vigna unguiculata L. Walp*, paper presented during the 5th Humboldt Conference “Kolleg” 2018 whose theme was “The role of Alumni networks in mentorship and collaboration in Multidisciplinary research : Foundation for Kenya’s Vision 2030.” Held on the 19th – 21st June, 2018”at Sportsman’s Arms Hotel in Nanyuki, Kenya, Africa.

Sikolia, S.F., 2017 : *Scientific approaches (or instructional strategies) in teaching science-related disciplines at the university in Kenya*, a paper presented during the Kenya DAAD scholars association (KDSA) Mt. Kenya Regional Alumni Chapter 2nd International Conference on Higher Education : University – Industry Linkages : Identifying and Synergising Opportunities for quality Higher Education held on the 4th – 6th October, 2017 at Meru University of Science and Technology, Main Campus, off Meru-Maua Road, Kenya, Africa.

Sikolia, S.F., 2017 : “*Effect of climate change and anthropogenic processes on the vegetation change and primary productivity patterns along an altitudinal change in Kitale-Mt. Elgon-Marigat in the Western region in Kenya*”, paper presented during the Gordon Research Conference : Photosynthesis : frontiers of science held on the 16th – 21st July, 2017 at the Grand Summit hotel, Sunday River in Newry ME, United States of America.

Sikolia, S.F., 2017 : “*The status of scientific researches and politics in the world*” paper presented during the KDSA Annual Conference : The role of Higher

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Education in the electoral process and Democratization of Politics in Kenya held on the 17th – 20th June at Kisumu Hotel, Kisumu, Kenya, Africa ; acted as **overall moderator** of the KDSA Conference.

Sikolia, S.F., 2016: “*Distribution of the C₃ and C₄ photosynthetic species (dicots) along the altitudinal gradient and its ecological implications in the bioproductivity paradigm in Kenya*”, paper presented during the 2nd Alexander Von Humboldt Foundation Conference: Research and Networking: “Laying the foundation for a sustainable development goals – Biodiversity sub theme” organized in collaboration with DAAD Regional Office for Africa held on the 6th - 8th April, 2016 at Naivasha, Kenya, Africa.

Sikolia, S.F., 2016 : “*Climate change and primary productivity during photosynthesis*”, paper presented during the 17th International Congress on Photosynthesis Research held on the 7th -12th August 2016 in the Maastricht Convention Centre (MECC), Maastricht, the Netherlands.

Sikolia, S.F., 2006 : “*The distribution of the C₃ and C₄ photosynthetic dicot species of the Centrospermeae in relation to climatic variables along the altitudinal gradient in the semi-arid and arid ecosystems (western region), Kenya*”, paper presented during the regional conference : “The sustainability of resources : An integrative view”, sponsored by DAAD held on the 29th – 31st, November 2006 at the University of Nairobi, Nairobi, Kenya, Africa.

Sikolia, S.F., 2005 : “*The variations of Kranz syndrome occurring in the angiosperms and their evolutionary structural and functional significance in the development of the photosynthetic types.*” A perspective concept for discussion. Paper no presented during the first Annual Conference of Plant Science sponsored by DAAD, 2005.

Sikolia, S.F., 1998: “*C₃ and C₄ photosynthesis, atmospheric carbon dioxide and climate*”, seminar paper presented at IRPS, on the 26th November, 1998, Maseno University, Kenya.

Sikolia, S.F., 1998: “Carbon isotope discrimination values along the altitudinal gradient in western region of Kenya”, seminar sponsored by DAAD held on the 6th at the University of Bayreuth, Germany.

Sikolia, S.F., 1995: “Botanical techniques and ethno botany: A case of herbarium practice”, paper presented during the First NAPRECA Workshop sponsored by DAAD for researchers in plant natural products held on the 30th July, 1995 at Maseno University, Kisumu, Kenya.

Sikolia, S.F., 1995: “Cataloguing of biological diversity of river and stream areas

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of the riverine and forest ecosystems of Ikolomani division, Kakamega District: Focus on Medicinal plants and agricultural plants of economic importance”, held on the 25th August 1995, at Kakamega Hotel, Kakamega, Kenya sponsored by IDRC and SIDA.

ORGANIZING AN INTERNATIONAL CONFERENCE/SEMINAR

1. University of Bayreuth International Research Alumni Conference held on the 28th-30th September, 2018 at Kisumu Hotel, Kisumu, Kenya, Africa. (**Team Coordinator**)
2. Kenya DAAD Scholars Association (KDSA): 2017 National Conference whose theme was “The Role of Higher Education in the Electoral process and Democratization of Politics in Kenya”, held on the 15th-16th June, 2017 at Kisumu Hotel, Kisumu City, Kenya, Africa. Presented a paper on the status of “Scientific Researches and Politics in the world”. (**Overall Moderator**)
3. The KDSA (Maseno University Chapter) Conference : “Strengthening systems and capacity graduate supervision, examination and Publication in the Universities” held on the 26th-27th April 2018 at Kisumu Hotel, Kisumu, Kenya, Africa. (**Principal Coordinator/Sourced for Funding**)
4. 2nd Bayreuth Alumni Conference : “Networking for Research and Sustainable Development Goals” Organized by Bayreuth International Alumni East Africa and DAAD sponsored held on the 12th – 13th February, 2016 at Kisumu Hotel, Maseno University, Kenya, Africa. (**Team Coordinator**)

CURRENT RESEARCH PROPOSALS

Development of effective and efficient informatics of monitoring distribution dynamics and utilization of biodiversity in Lake Victoria (J.R.S Biodiversity foundation Project awaiting funding : 2022 – 2023 period).

MEMBER OF JOURNAL PUBLICATION PEER REVIEWER

- Journal of Developmental Biological and Tissue Engineering : Reviewed Paper : JDBTE-10-008.
- Reviewer for the ICED 2022 Conference: review 3-5 short abstracts (400-

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600 words).

REVIEW OF COMPANY AND NGOS PROFILES

- **Development Partners** : Focus on the medicinal and agricultural plants of Ikolomani Division, Kakamega District. (AN NGO)
- **SSACHE limited** : Enhancing Results and Sustainability - “Africa Centre for Environment and Safety Healthy Services”, 2021. (COMPANY)

SCHOLARSHIP AWARDS

- National Research Fund for Multidisciplinary Research, 2017/2018-2019/2020
- DAAD Funding worth Kshs. 617,000.00 for KDSA Workshop in 2018
- NACOSTI Funding for Postgraduate studies between 2015/2017
- Institute of Research and Postgraduate studies for finalizing PhD studies and publications.
- DAAD Scholarship for PhD Research studies, 2000/2003
- AAS Scholarship for PH. D Research studies, 1998/2000
- Institute of Research and Postgraduate studies for finalizing PhD studies and Publications
- IDRC and SIDA for Research studies and documentation of Kakamega forest Biodiversity.
- Kenyatta University Scholarship Award for Master of Science (Research work and Capacity Building)

POSTGRADUATE RESEARCH SUPERVISION

DOCTOR OF PHILOSOPHY STUDIES

- **PhD Research Work entitled**, “A melissopalynological, Physico-chemical and Organoleptic characterization of Aboriginal Ogiek honey in the Eastern Mau forest block. A perspective towards incentivisation of biodiversity conservation.” **By Phillip Omondi Onyango (PG/PhD/151/13), Maseno University. (Completed and Graduated, 2019)”**
- **PhD Research Work entitled**, “Effects of climatic factors on vegetation

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change and primary productivity along altitudinal gradient in western region of Kenya.” By **Murono Dorca Auma SSCB416-3601/2019, JKUAT. (Ongoing Research)**

- **PhD Research Work entitled, “The genetic basis of post infection resistance of *Fusarium* wilt in Bambara groundnut. (*Vigna subterranean* (1) Verdc. 2N=2x=22): “The Kenyan case”, By Erick Temba Wekesa (PG/PhD/015/17), Maseno University.**
- **PhD Research Work entitled, “The effect of weather and food processing on dissipation of Carbendazim, imidacloprid, acetamiprid, diazinon, Cypermethrin and Profenofos pesticide in the field grown kales, tomatoes and bell pepper in Kenya”, By Onesmus Kyalo Mwaniki (PhD/SC/00055/2017), Maseno University. (Ongoing Research).**

MASTER THESIS

- **Master Thesis entitled, “Palynological studies of some *Indigofera Linn* (Fabaceae Papilionoideae) species in Western Kenya, By Phillip Omondi Onyango (PG/MSc/0015/2007) ... (Completed and graduated)**
- **Master Thesis entitled, “Effects of soil water deficit on the growth and physiology of selected African Nightshades (*Solanum scabrum* Mill. and *Solanum villosum* Mill.),” By Oscar Jomo Mbera (PG/MSc/063/2010), Maseno University. ... (Completed and graduated)**
- **Master Thesis entitled, “Annotated checklist of the vascular plants conservation at the University Botanic Garden, Maseno”, By Seline Omondi (PG/MSc/023/2010), Maseno University. ... (Completed and graduated)**
- **Master Thesis entitled, “Secondary schools perception of the topic evolution “by Kosasia Amos Jackson, Masinde Muliro University of Science and Technology. ... (Completed and graduated)**

RESPONSIBILITIES/COMMUNITY

- Chairman, B.O.G, Matsakha Secondary School (2001 – 2004)
- Member of B.O.G Silungai Secondary School (2008 – 2012)
- Member of Board of Management of Malava Girls High (2016 – to date).

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- Chairman of Board of Management of Lwandeti Secondary School, 2019-Todate

PHILANTHROPIC CAUSE

- Textbooks (6) contributed to Vihiga High School
- 2 Textbooks to Mbihi high School
- 10 Text to Matsakha Secondary School

ACADEMIC EXCHANGE AND RESEARCH STUDY VISIT TO INTERNATIONAL SCIENTIFIC INSTITUTIONS AND RESEARCH LABORATORIES

- Prof. Erwin Beck
Universität Biologie
Lehrstuhl Pflanzenphysiologie
Universitätsstrabe 30
95447 Bayreuth
- Prof. William D. Stock (Currently, Professor Emeritus at Edith Cowan University, Greater Perth Area)

University of Cape Town
South Africa, Africa
- Prof. Richard Hauke
The University of Rhodes Island
Rhodes Island, USA
- Prof. C. R. Nagendran
University of Mysore
Faculty at BASE, Mysore
INDIA

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REFEREES

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Prof. Waceke Wanjohi (FBS. KNAS)
Dean, Agricultural Science and Enterprise Development
Kenyatta University

P.O. BOX 43844-00100

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Dean, School of Physical and Biological Sciences
Maseno University

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Cell phone number : 0722538943

Digital
Footprint

e.g. [Link to personal website if available.](#)