

Juniper Boroka Kiss

Driven Plant Scientist, Data Analyst, and Science Communicator

Technical advisor with 8+ years of experience in plant science, public health, spatial modeling, field work, and stakeholder engagement in UK, Australia, Europe, USA, Namibia, Nepal, Philippines, Costa Rica, Tanzania, and Papua New Guinea. Passionate about creating data-driven, practical solutions to stakeholders and community building.

Skills briefly: Stakeholder engagement, Project planning and management, Team leadership, Multi-million dollar research proposal writing, Budget management, Training and workshop delivery, Science communication, Graphic design, Botany, Plant Pathology, Epidemiology, Lab and greenhouse experiments, Advanced statistical skills and spatial analysis, Literature reviews, Data extractions (APIs, Python), RShiny app development, AI chatbot building, Remote sensing, GIS (QGIS, ArcGIS), R, Bash, C++, Julia, MatLab, PowerBi, HPC, AWS (EC2, AWS Batch, Vantage), Java, JavaScript, HTML, Python, GitLab and GitHub, Google Cloud Projects and Google Earth Engine, BigQuery, Azure

HIGHLIGHTED WORK EXPERIENCE

Technical Advisor

9/2024 – 9/2025

Malaria Atlas Project (MAP) Dar es Salaam Node and GBD Team, based at Geospatial Health and Development, The Kids Research Institute Australia (Perth, WA, Australia)

- Streamlined and revamped scalable Bayesian geospatial workflows (INLA modelling) using R/Posit Workbench (AWS) and GitLab pipelines
- Supported the Global Burdens of Disease modelling group by migrating and improving their 42-stage modelling pipeline to AWS and the national modelling group (Dar es Salaam) by establishing workflows, digital tools and protocols
- Developed a new pipeline for geolocating health facilities and DHS/MIS survey clusters using Google MAP APIs, fuzzy matching and machine learning - directly supporting CHAI, IDEM and NMCPs; improved program efficiency in 5 countries
- Built approx. 15 robust RShiny apps using asynchronous programming and EC2 deployment to improve internal data processing and visualisation, as well as stand alone, secure apps to disseminate our modelling outputs
- Lead and designed the first, hybrid cohort of the [MAP Dar ECR Training and Mentorship Program](#) to increase research capacity (coding and leadership) in Tanzania and Zambia, with 100% satisfaction rate

Extension Group Leader

9/2023 – 4/2024

Plant and Livestock Industries in Agricultural Branch, Department of Industry, Tourism and Trade, Northern Territory Government (Darwin, NT, Australia)

- Spearheaded a team of 7 extension officers across Darwin, Katherine, and Alice Springs, equipping 20+ researchers with enhanced extension skills
- United 38 research projects towards Agribusiness Strategy 2030 goals, improving collaboration between NT's Agribusiness & Biosecurity sectors
- Engineered a custom RShiny dashboard that visualised KPIs related to research projects, extension activities, and stakeholder engagement
- Supervised the successful migration of 1,000+ farmer and researcher contacts to a centralised CRM database, enabling targeted communication strategies and boosting participation in field days
- Co-developed 4 successful research proposals (AUD\$2.1m), facilitated stakeholder consultations for 20+ projects and delivered project milestones

Research Officer

1/2023 – 8/2023

Malaria Atlas Project (MAP) Perth Node, based at Geospatial Health and Development, Telethon Kids Institute (Perth, WA, Australia)

- Modernised global malaria mapping via database updates, platform shift (HPC to Posit Workbench), improving 8 steps of a 42-stage modeling pipeline, including PfPR cube (1.5 TB RAM)
- Led the spatial analysis of anti-malarial resistance SNPs in collaboration with Swiss TPH and Novartis, providing insights for key intervention targets for their new anti-malarial products
- Supported three research projects (e.g., Gate's Foundation's Goalkeeper's project, treatment delay modelling, severe malaria modelling, seasonality modelling) and contributed to manuscripts (including Lancet publications)

CONTACT

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LinkedIn profile:

<https://www.linkedin.com/in/juniper-kiss>

Personal website:

<https://tykoonbk.wixsite.com/juniperkiss/cv>

Location: Perth, WA, Australia

UK: Settled Status

EDUCATION

2020-2022: UKRI NERC-funded INSPIRE Doctoral Training Program - University of Southampton: *"Enhancing ecosystem functioning to improve the resilience of subsistence farming in Papua New Guinea"*. Withdrew studies due to contracting malaria in Papua New Guinea in 2022-2023.

2019-2020: BBSRC SWBio Doctoral Training Program – University of Exeter: *"Preparing for Fusarium wilt of bananas in Latin America"*. Exited program with **Masters by Research with Distinction in Biological Science** from the University of Bristol.

2017-2019: Bachelor of Science (BSc Hons) Plant Biology with First Class Degree - Aberystwyth University. Top Student within the university and amongst the Royal Society of Biology-accredited courses in the UK.

2014-2017: Certificate of Higher Education in Marine Biology with Biodiversity and Conservation - Anglia Ruskin University. Studied part-time whilst working full-time.

AWARDS AND SCHOLARSHIPS

Full list:

<https://tykoonbk.wixsite.com/juniperkiss/cv>

- AMMNet Small Event Award, 2025, (\$3,000) – Hosting "From Data to Decisions: Empowering Early Career Researchers in Spatial Modeling and Malaria Control" Symposium in Dar es Salaam, Tanzania
- NERC Omics Facility grant, 2021 (£12,000) - Soil microbial shotgun metagenomic sequencing
- Heredity Fieldwork Grant by the Genetics Society, 2021 (£1,500) – Investigating soil functioning under experimental soil management practices in PNG.
- Judith Heath Explorer for Botany and Research by the Scientific Exploration Society, 2021 (£5,250) – Led a sweet potato hunt along Mt Wilhelm in Papua New Guinea
- British Society of Plant Pathology's Junior Fellowship, 2021 (£3,000) – Led a plant disease id workshop

Ag Research, Development and Extension Officer 8/2022 – 1/2023

Liebe Group (Dalwallinu, WA, Australia)

- Coordinated and monitored 17 crop trials funded by different agencies (e.g., DPIRD, NRM, GRDC, GGA) on farmers' lands in collaboration with researchers including designing field trials, collecting crop and soil samples, identifying weeds and recording plant traits
- Wrote progress reports, coordinated with consultants, and wrote successful GRDC tenders (AUS\$1.7 million)
- Formalised an outreach program, sharing findings with farmers, publishing in Farmers Weekly, and writing 6-10 R&D book articles and presented during our Field Days and grower workshops
- Led grower surveys regarding data usage around farms, demonstrated the value of soil moisture probe network by monthly crop yield estimates from 18 paddocks to our members

Blogger and Social Media Assistant 2/2020 – 1/2022

BotanyOne (Annals of Botany Company, UK)

- Managed social media channels using Buffer and Tweetdeck and wrote two blog articles per week (<https://www.botany.one/author/juniper/>)
- Monitored daily plant science-related press releases, interviewed scientists and wrote weekly newsletter to >3,000 subscribers
- Maintained website (HTML), coordinated blog articles and projects on Airtable with a team of 5 bloggers, and incorporated AI-tools

Social Media and Digital Communications Assistant 2/2018 – 8/2019

American Society of Plant Biologists (remotely, USA)

- Managed multiplatform social media channels (e.g., Plantae, ASPB, Taproot Twitter, Facebook and Instagram channels) using Buffer and met targets (e.g. reached 2-4 million impressions on Twitter and Facebook within 6 months)
- Spearheaded digital engagement on the Plantae platform by writing 30+ scientific blog posts and launching a podcast and webinar series, fostering an online community for plant scientists with 500+ subscribers

Field Trials Technician and Team Leader 8/2015 – 1/2017

National Institute of Agricultural Botany (Cambridge, UK)

- Implemented Distinctiveness, Uniformity, and Stability (DUS) field trials for cereals, oilseed rape and pulses, mentoring 10+ technical staff in data collection, character evaluation, adhering to EU regulatory requirements
- Spearheaded daily off-site data collection and evaluation of plant characters from 5,000 plots, standardised high throughput image analysis of oilseed rape, on a \$1.2 million budget, delivering the project 3 weeks early to DEFRA
- Trained new staff and supervised 10 technicians, maintained the Long-Term Seed Storage samples and database, inspected farms as Crop Inspector

Research Technician 5/2015 – 9/2015, 5/2013 – 9/2013

Centre for Agriculture and Bioscience International (CABI, Egham)

- Provided technical support for multiple-choice experiments to test potential arthropod biocontrol agents against invasive plants (e.g., *Fallopia japonica*, *Hydrocotyle ranunculoides*, *Azolla filiculoides*) and designed experiments
- Maintained daily over 1,000 invasive and native plants, and arthropod populations (e.g., psyllids, weevils) in greenhouse facilities for research experiments
- Performed general maintenance of Level 2 and Level 3 quarantine facilities, including discarding, or moving plant materials according to SOPs

WORK HISTORY

Technical Advisor – The Kids Research Institute Australia	9/2024 – 9/2025
Extension Group Leader – NT Government (Darwin, AUS)	9/2023 – 4/2024
Research Officer – Telethon Kids Institute (Perth, AUS)	1/2023 – 9/2023
Agricultural R&D&Extension Officer - Liebe Group (WA, AUS)	8/2022 – 12/2022
Blogger and Social Media Assistant – BotanyOne (UK)	2/2020 – 1/2022
Social Media and Comms Assistant – ASPB (USA)	2/2018 – 9/2019
Editor in Chief – GOES Magazine	8/2016 – 10/2017
Administration Assistant – Eszterházy Károly University (HU)	5/2017 – 8/2017
Field Trials Technician and Team Leader – NIAB (Cambridge, UK)	8/2015 – 1/2017
Summer Research Technician – CABI (Egham, UK)	5/2015 – 8/2015
Catering Assistant – National Trust (Anglesey Abbey, UK)	9/2014 – 6/2015
Administration Assistant – Eszterházy Károly University (HU)	5/2014 – 8/2014
Summer Technician – CABI (Egham, UK)	5/2013 – 8/2013

- Nelson Yield-Limiting Factors Graduate Student Scholarship, 2020 (\$3,000) by American Society of Agronomy, Crop Science and Soil Science
- Agronomic Travel Study Undergraduate Scholarship, 2018 (\$5,000) by ASA – 3-week intensive Rice: Research to Production course at IRRI (Los Banos, Philippines)
- C. Roy Adair Scholar by University of Arkansas, 2018 (\$5,600) – Worked with downy mildew resistance in baby spinach, including primer designing, Virus-Induced Gene Silencing and spinach tissue culture
- Anglia Trust Foundation Scholarship (£750), 2017- Six weeks working the Ministry of Agriculture and CABI in Nepal to support agricultural extension programs
- Anglia Trust Foundation Scholarship, 2015 (£750) – 10 weeks in the Namib Desert carrying out vegetation surveys and biodiversity monitoring.

VOLUNTEERING

- Kings Park Botanic Gardens (AUS): 2024 – present
- Committee Member and Secretary of Society of Chemical Industry's Horticulture and Agrifood ECR groups (UK): 2019 – 2021
- eLife Community Ambassador
- ASPB Convivor Scholar (2018)
- Steering Committee member – New Networks for Nature (UK): 2017 – 2019
- Executive Committee member – Cambridge Conservation Forum (UK): 2015 – 2017

HIGHLIGHTED PEER-REVIEWED PUBLICATION

Weiss et al., 2025. Mapping the global prevalence, incidence, and mortality of *Plasmodium falciparum* and *Plasmodium vivax* malaria, 2000–22: a spatial and temporal modelling study. *The Lancet*, 405(10483), pp.979-990.

RECENT REFERENCES

- Jailos Lubinda, Senior Research Officer and current manager (MAP, The Kids Research Institute Australia, Perth, WA, Australia), Email: jailos.lubinda@telethonkids.org.au
- Susan King, Regional Director (Department of Industry, Tourism and Trade, Northern Territory Government, Katherine, NT, Australia), Email: susan.king@nt.gov.au
- Chris O'Callaghan, Executive Officer (Liebe Group, Dalwallinu, WA, Australia), Email: chris@liebegroup.org.au