Justin Ephraim Isip *Curriculum Vitae*

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Research interests

Global biodiversity change, macroecology, tropical ecology and collections based museum research.

I am currently a postdoctoral researcher on the NERC-funded project GLiTRS investigating the impact of key anthropogenic pressures on insect biodiversity. I recently completed my PhD on the London NERC DTP at the Natural History Museum and the Centre for Biodiversity and Environmental Research (CBER) at UCL. My research focused on how anthropogenic threats impact biodiversity on a global scale, with a particular focus on insects. I worked mainly with the PREDICTS database. Outside of research, I'm also passionate about making ecology a more diverse and inclusive field. I sit on the committee as the Partnerships Officer for the REED Network under the British Ecological Society, aiming to develop more cross-pollination between EDI networks and initiatives both within and outside of academia.

Education

PhD researcher — NHM & UCL, UK
Supervisors: Professor Andy Purvis (NHM) and Dr Tim Newbold (UCL) — *Sep '21 – present*

- PhD title: *How do anthropogenic threats reorganise insect communities?*
- NHM Student Committee member: I help organise student events at the museum, in particular the annual Student Conference.
- SciFri Committee member: I help organise events for SciFri which is a cross-departmental science seminar series and social event.

MSc Taxonomy, Biodiversity and Evolution (distinction) — ICL & NHM, UK
Imperial College London & The Natural History Museum London — *Oct '19 – Oct '20*

- Rigorous training in advanced methods in taxonomy and systematics, focusing on phylogenetics, molecular systematics, genomics, biodiversity and statistics.
- MSc Representative: I represented the views of my masters cohort in departmental meetings.
- Research project: *Comparative analyses of bite-force in lepidosaurs (Reptilia: Lepidosauria) - Grade: 74% Skills: Extracting data from the literature and building large datasets de novo, Proficient in* R; `R Markdown`; `tidyverse`; `ggplot2`; *version control via* `git`; `PGLS` *models, linear models,* LaTeX.
- Awards: *The Sydney Perry Foundation (£1200), The Coats Foundation (£1091), The Richard Stapley Trust (£1000) and The St. Clement Danes Educational Trust (£650).*

BSc Zoology (1:1) — Whitelands College, UK
University of Roehampton — *Sep '16 – May '19*

- Research project: *'A new species of dead-leaf toad from the Eastern Arc Mountains of Tanzania?' Grade: 90% Skills: Amphibian systematics and taxonomy, principal component analysis, morphometric and image analyses.*
- Awards: *Department of Life Sciences Award, Year 2 and Year 3 prize for Zoology (2018 & 2019) for being the student with the highest average grade awarded for both years and the highest dissertation mark overall.*

Publications

9. **Isip, J.E.**, et al., & Purvis, A. (in prep). Ecological traits affect the sensitivity of insect biodiversity to land-use pressures.

8. **Isip, J.E.**, et al., & Purvis, A. (in prep). Land use change and intensification drive global declines in insect biomass.

7. **Isip, J.E.** & Purvis, A. (in prep). Matched comparisons highlight divergent impacts of land-use change on the dominant orders of insects.

6. Outhwaite, C. L., **Isip, J.E.**, et al., (in prep). The response of Hymenoptera (bees, wasps, ants) to a changing world.

5. Cooke, R., **Isip, J.E.**, et al., (in prep). IN-TIME - a global database of insect time series, primary resolved to the species level.

4. Bladon, A., **Isip, J.E.**, et al., (in revision at Conservation Letters). Global Biodiversity Framework targets can drive action on insect declines, but lack robust indicators to prove their effectiveness.

3. Millard, J., **Isip, J.E.**, et al., (2025). A multi-threat meta-analytic database for understanding insect biodiversity change. *Diversity and Distributions.* See here.

2. Millard, J., **Isip, J.E.**, et al., (2024). ChatGPT is likely reducing opportunity for support, friendship, and learned kindness in research. *Methods in Ecology and Evolution*.. See here.

1. **Isip, J.E.**, Jones, M.E.H & Cooper, N. (2022). Clade-wide variation in bite-force performance is determined primarily by size, not ecology. *Proceedings of the Royal Society B. 289(1969), p.20212493.* See here.

Relevant Work Experience

Policy Fellow — London, UK

The Office for Environmental Protection (OEP) and the British Ecological Society — *Oct '24 – Feb '25*

- Awarded £20,000 to conduct a 4.5 month policy fellowship with the OEP on the topic of sustainable pesticide use and its impacts on the Species Abundance Indicator in England.
- Developed an extensive stakeholder engagement plan, meeting with researchers, academics and civil servants across environmental NGOs, public bodies and industry to compile evidence on this topic.
- Worked on a legal investigation by the OEP into DEFRA's emergency authorisation of a banned pesticide, gaining insight into the environmental regulatory, investigations and complaints process in the UK.

Research Technician — London, UK

NatuRisk project at The Natural History Museum — *Sep '22 – Dec '22*

- Gained skills in meta-analysis, e.g. searching and exporting, screening via `metagear`, quality-assurance and data-extraction via `metadigitise`).
- Trained in the management and curation of meta analytical datasets.

Trainee — London, UK

London Wildlife Trust — *Apr '21 – Jul '21*

- 3 month competitive traineeship on the Keeping it Wild training programme led by the London Wildlife Trust in partnership with London Youth, Headliners UK and the John Muir Trust.
- Trained in practical skills in urban nature conservation, community engagement, environmental education and communications.
- OCN Level 1 Youth Leadership.
- OCN Level 1 Media and Journalism.
- Received the John Muir Discovery Award.

Zoology Volunteer — London, UK

Natural History Museum — *Nov '17 – Oct '20*

- Gained skills in curation and collection management of herpetological specimens.
- Trained in data management and curation, museum lab protocol and handling of wet specimens.
- Previous projects include: the digitisation of the amphibian true toad family (Bufonidae,> 600 *spp.*)

Forestry Scientist — Iwokrama, Guyana

Operation Wallacea — *Jun – Aug '17,'18,'19*

- In 2017, I crowdfunded over £2,500 and was awarded a grant from the Jack Petchey Foundation to volunteer as a research assistant.
- In 2018 & 2019, I led forestry surveys in the Iwokrama and Surama Forests.
- Surveys in pristine rainforest, ecotourism and reduced impact-logging sites.
- Teaching tropical ecology/field skills to 40 - 50 research assistants per field season.

Volunteer Aquarist — London, UK

London Zoo Aquarium — *Mar 18' – Jun '18*

- Trained in fish husbandry, responsible for freshwater section.
- Tasks included preparing food, feeding animals and cleaning enclosures.
- Projects included target training of Arapaima (*Arapaima gigas*) for relocation to a new site and monitoring the health of multiple seahorse populations via regular nutrient and chemical dosing of enclosures and recording of abiotic factors.

Research Assistant — Pembrokshire, Wales

Biosciences Field Course, University of Roehampton — *May '17 – June '17*

- 2nd year ecology field course, centred around different UK ecosystems, e.g. rivers and streams, sand dunes, woodlands, heathlands and rocky shores.
- Developed field skills in habitat surveying, field sampling, survey techniques and animal behaviour.

Skills

Science Communication: Contributor to the Evolve Magazine Spring 2025 (page 24-31) article on *"Where have all the wasps gone?"*. Behind the Science article published on the NHM website, Advocates for the Planet published in the NHM Evolve Magazine (page 58-59), Science article "Lizard lifestyle has no impact on their biting force" on my first first-author paper published on the NHM website. Panelist on "Doing a PhD at the Museum" for the "Postgraduate Showcase" event at the NHM. Scientist featured in the NHM *"Fixing Our Broken Planet"* public exhibition. Developed and led a workshop to 100+ students on*"the relationship between biodiversity, science policy and environmental justice"* for the London NERC Environmental Summer School in partnership with UCL, ZSL and NHM. Scientist featured in the Royal Society of Biology Memory Game 2024 (see here) and Biosciences video series (see here).

Scientific conferences and presentations: lead organiser of the NHM Student Conference 2023 (*2 day event*) including a Twitter takeover. Attendee at the BES Annual Conference (2022) and the London NERC DTP Conference (2022). Attendee and poster at the BES Annual Conference (2024). Attendee at the Landscape Ecology UK Conference (2025). Attendee and poster at the International Society for Ecological Modelling Global Conference held in Japan (2025). Invited panelist for the Broadly Scientific "Academic Publishing" event under the London NERC DTP. Presented at the Equator Research School Conference, Explorers Summer Social held at the Geological Society, GLiTRs Annual Retreat, BES Macroecology SIG Annual Conference, CBER Annual Retreat, Darwin Day at the Paris Museum of Natural History, Sustainability Committee at Sicame UK, CBER Journal Club, Joint DTP Conference 2024 "Micro to Macro: Changing Environments on Every Scale".

Technical skills: *Computational skills:* R, `R Markdown`, UNIX/Linux, `git`. I use the `tidyverse` packages for data cleaning/tidying. and `ggplot2` for data visualisation. Phylogenetic Generalised Least Squares (PGLS) analyses using a variety of packages such as `geiger`, `phytools`, `ape`, `caper` for manipulating data and phylogenies in R. *Statistics:* Summary statistics, linear models, GLMMs, maximum likelihood, bayesian statistics.

Field skills: *Forestry:* Identification of neotropical tree/plant species, inventory plots, measurement of functional traits. *Entomology:* Butterfly trapping, light trapping, malaise trapping, pitfall trapping and kick sampling. *Herpetology:* Venomous/non-venomous snake handling, visual encounter surveys. *Ornithology:* Mist netting (50+ birds ringed in the neotropics), point counts. *Mammalogy:* Bat mist netting (200+ extracted), camera trapping, point counts.

Languages: English (*first language*), Tagalog (*beginner*).

Other Experience

Teaching: Supervisor to Antonia Chan (MSc Biodiversity and Global Change, UCL) dissertation on *"Insect declines or insect turnover? Zooming in on how land-use change affects insects"*. Methods in Ecology and Evolution (1st year module), Ecology and Data Science Field Course at the Queen Elizabeth Olympic Park (MSc/MRes), Bio-robotics and Animal Movement Project (KS2/3), Computational Methods in Biodiversity Research (BIOS002), Foundations in Ecology and Ecological Monitoring (BIOS0003), Foundations of Citizen Science (BIOS0035), Sex, Genes and Evolution (BIOL0020), Nature-Smart Challenge (BIOS0033). Bio-Robots: Crawl, Jump, and Slither. UCL Blakeney Point Ecological Field Course. Conservation Optimism workshop with Dr Helen Roy. Student mentor on the London NERC DTP Undergraduate Research Experience Placements at the NHM.

Equality, Diversity and Inclusion: Partnerships Officer for the REED Network under the British Ecological Society. I have helped out significantly with the Explorers Programme at the NHM, including events such as *The Explorers Family Festival Islam, The Explorers Family Festival Caribbean Islands, The Explorers "Build a Museum" workshop* (*x2*) *and The Explorers Annual Conference*. Student REP on London NERC DTP EDI committee. Attended the Equator Research School progamme in 2023 and led a blog post on our experiences titled "Finding your people at summer school" published on the British Ecological Society website. Gave gave a talk on doing a PhD as a person of colour to KS3/4 school groups as part of the Gaia Public Art Programme at UCL East (x 2). Gave a lunchtime skills seminar for the REED Network on the topic "alternative methods of postgraduate funding".
