Yacob Haddou

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Education

Ph.D. in Ecology and Statistics 2020 – Present
Topic: Modelling ecological lags and delays to landscape disturbance. Quantifying extinction debts and colonization credits. University of Glasgow, MVLS DTP studentship.

M.Sc. Quantitative Methods in Biodiversity, Conservation and Epidemiology 2018 – 2019
University of Glasgow, Awarded: First/Distinction.
Dissertation: How is avian diversity affected by urbanisation? Bridging temporal and spatial dimensions in quantifying the legacy effects of urbanising landscapes.
Completed courses: Programming in R, Spatial Ecology and Biodiversity, Introduction to Bayesian Statistics, Single Species Models, Multi Species Models, Economic Tools for Conservation, Conservation Genetics, Human Dimension of Conservation, Infectious Disease Ecology.

B.Sc. International Wildlife Biology (Honours) 2015 – 2018
University of South Wales, 2015 – 2018. Awarded 2:1.
Dissertation: Analysis of climatic change impact on alpine grassland contraction, including future scenarios and conservation priority for avifaunal communities in the Dolomiti Bellunesi National Park, Italy.

Academic employment

Consultant December 2021
International Companion Animal Management Coalition – FAO. Survey design and planning for dog presence/opinion data across Dhaka.

Teaching Assistant September 2019 – Present
University of Glasgow. Over 500 working hours in assisting Lecturers in conducting, tutoring and marking a variety of Postgraduate and Undergraduate levels university courses.

Researcher February 2021 – May 2021
University of Glasgow. Providing scientific support to the Bangladesh government and ICDDRB. Evaluation of response measures within Dhaka. Spatio-Temporal modelling of incidence patterns. Geospatial analyses and visualization of trends. Member of the COVID-19 LMICS modelling group.

Researcher September 2019 – September 2020
University of Glasgow, Institute of Animal Health Biodiversity and Comparative Medicine. Statistical modelling of biodiversity and land cover change data, estimating delays in the response of diversity to land cover change.

Microbiology Laboratory Assistant Summer 2018
University of South Wales. Development of practical teaching and assistance in laboratory practices. Barcoding of Welsh Bryophytes. eDNA use to detect presence/absence of Eurasian otter in water courses.

Field Research Assistant in the Yucatan Peninsula, Mexico Summer 2017
University of South Wales. Tropical Ecology course credits. Behavioural observations of primates, large mammals camera trapping, butterfly capture and ID. PADI Open Water Scuba Diving Qualification. Scientific diving and surveys techniques. Independent projects: Feeding preferences of hummingbirds in the Calakmul Biosphere Reserve. Analysis of tree diameter relation to spatial placement in dry tropical forest. Reef diversity at multiple depths in Akumal, Quintana Roo.

Field Research Assistant in South Africa Summer 2016
University of South Wales. African Ecosystems course credit. Extensive camera trapping. ID/tracking skills across taxas. Rifle and handgun practice. First aid. Distance sampling. Small rodents nest mapping.

Vegetation surveys across diverse habitats: grassland, savanna, semi-desert. Independent projects: Analysis of bird community's composition between dry grassland and little Karoo.

Experiences

- PhD, Postgraduate and Undergraduate Course Representative, 2016 – Present
- New students welcoming mentor, 2016 – 2018
- Volunteering with "The Wildlife Trust of South and West Wales", 2017 – 2018
- RSPB Cardiff Urban Swift population survey, Spring 2018
- British Ecological Society Membership, 2017 – Present

Proficiencies

- <u>Statistics</u>: Bayesian and Frequentist frameworks. JAGS, STAN, GLMER, GAMs, INLA, HMSC methodologies.
- <u>GIS</u>: SF, ArcGIS, QGIS, ERDAS, Whitebox, spatial R and GPS data collection.
- <u>Survey methodologies:</u> Breeding Bird Survey, Capture Mark Recapture (small mammals, giraffes), point count sampling, walked transects, mist netting for bats and birds, freshwater kick sampling, rocky shore species zonation, soil layering, water sampling from boat at different depths.
- <u>Environmental consultancy and policies</u>**:** wildlife legislation (European and global frameworks), Phase 1 Habitat Survey and the creation of a PEA (Preliminary Ecology Appraisal).
- <u>Laboratory experience:</u> dissection on several taxa (invertebrates, dogfish, pigeon), behavioural measurements (crickets, guppies, flatworms), plant and animal DNA extraction, PCR protocols, DNA sequencing interpretation, phylogenetic cladograms, microbiology biosafety level 2, bacterial antibiotic resistance measurements, use of low and high-resolution microscopes.
- <u>Computer programming:</u> R, Java, HTML, CSS, PHP, SQL. Proficient computer power-user.
- PADI Open Water Scuba Diving Qualification. Scientific diving and surveys techniques.
- Experience in creating professional scientific posters and presentations. Scientific drawings.
- Driving license: Clean, category B.
- <u>Languages:</u> English (fluent), Italian (native), German (basic), Spanish(basic), Greek (basic). #

Talks/Seminars, tutorials & posters

- **BES Ecology Across Borders 2021 – Liverpool,** December 2021 – speaker
- **How to lit review, quantitatively,** November 2021 – tutorial
- **IBAHCM PhD seminars,** October 2021 - speaker
- **IBAHCM Spatial Ecology Seminar** February 2020 – Invited speaker
- **IBAHCM Diversity Seminar** December 2020 – Invited speaker
- **British Ecological Society Quantitative and Movement Ecology Conference** April 2019 – Poster

Publications

<u>In press:</u>

- **Haddou Y.**, Mancy R., Matthiopoulos J., Spatharis S., Dominoni D. (2020) Invisible biodiversity: extinction debts and colonization credits amongst US birds. *Nature Ecology and Evolution*. [https://doi.org/10.21203/rs.3.rs-134174/v1]

Submitted preprint:

- Capilla-Lasheras P., (…), **Yacob Haddou**, (…) (2021) A global meta-analysis reveals more variable life histories in urban birds compared to their non-urban neighbours. *bioRxiv*. [https://doi.org/10.1101/2021.09.24.461498]

- Brum E., (…), **Yacob Haddou**, (…) (2021) Surging COVID-19 in Bangladesh driven by B.1.351 variant. *medRxiv*. [https://doi.org/10.1101/2021.04.27.21255706]

- Chadwick F., (…), **Yacob Haddou**, (…), (2021) Combining Rapid Antigen Testing and Syndromic Surveillance Improves Sensitivity and Specificity of COVID-19 Detection: A Community-Based Prospective Diagnostic Study. *Lancet preprints*. [http://dx.doi.org/10.2139/ssrn.3927057]

In preparation:

- **Haddou Y.**, Illian J., Matthiopoulos J. (…)(2020) Spatial and temporal patterns of COVID-19 prevalence under conditions of high transmission in a densely populated megacity.