

SUMMARY

I develop state-of-the-art models to advance applied and theoretical methods for ecology and environmental management. My research area spans from big data analysis at local to global scales and includes field to laboratory experiments on vertebrates and invertebrates and their association with marine, freshwater, and terrestrial ecosystems. I examine how their responses vary with time and space in relation to variable climates. I work at the interface of data science, macroecology, spatial modeling, uncertainty, and quantitative risk assessment to guide the best scientific and management decision processes. I use R, ArcGIS, Python, and high-performance computing systems for my data analysis.

Based on my academic achievements, I was awarded the prestigious Melbourne Research Scholarship twice, to study for a Master of Philosophy and then a Doctor of Philosophy in Science at the University of Melbourne. My track record of academic excellence, publication in international peer-reviewed journals, and winning grants and awards demonstrates my skills as a researcher.

EDUCATION

PhD (2022), School of BioSciences, The University of Melbourne

Thesis: Understanding the patterns of distribution and environmental responses in Australian grasshoppers based on historic field survey notebooks

MPhil (2018), School of BioSciences, The University of Melbourne, **Grade H1 (marks: 90%)**

Thesis: Evaluating uncertainty when applying the trait-based protocol for climate-change vulnerability in freshwater crayfish

M.Sc. in Zoology (2012), University of Dhaka, **Grade Point Average 3.93** (on a scale of 4)

Thesis: *A historic and current exploitation of sawfish in Bangladesh*

Award: Gold Medal

B.Sc. in Zoology (2007 to 2011), University of Dhaka, **Cumulative Grade Point Average 3.83** (on a scale of 4)

Award: Dean's Award

PUBLICATIONS (see google scholar citations here: <http://go.unimelb.edu.au/b6qr>)

PEER-REVIEWED

Hossain MA, Lahoz-Monfort JJ, Kearney M. (in press.). Developing a database of Australian grasshopper occurrences from historic field survey notebooks spanning 54 years. *Austral Entomology*.

Legge S, Woinarski JCZ, ..., **Hossain MA**, ..., Tingley R. 2022. Rapid assessment of the biodiversity impacts of the 2019–2020 Australian megafires to guide urgent management intervention and recovery and lessons for other regions. *Diversity and Distributions*, **28**(3): 571–591. <https://doi.org/10.1111/ddi.13428>

- Kearney MR, **Hossain MA**, Sinclair SJ, Song H. 2021. Grasshopper country before and after: a resurvey of Ken Key's collecting expeditions in New South Wales, Australia, 70 years on. *Austral Entomology*, **60**(1): 52-65.
<https://doi.org/10.1111/aen.12515>
- Hossain MA**, Kujala H, Bland LM, Burgman M, Lahoz-Monfort JJ. 2019. Assessing the impacts of uncertainty in climate change vulnerability assessments. *Diversity and Distributions*, **25**(8): 1234-1245.
<https://doi.org/10.1111/ddi.12936>
- Hossain MA**, Lahoz-Monfort JJ, Burgman M, Kujala H, Bland LM. 2018. Assessing the vulnerability of freshwater crayfish to climate change. *Diversity and Distributions*, **24**(12): 1830-1843.
<https://doi.org/10.1111/ddi.12831>
- Hossain MA**, Thompson BS, Chowdhury GW, Mohsanin S, Fahad ZH, Koldewey HJ, Islam MA. 2015. Sawfish exploitation and status in Bangladesh. *Aquatic Conservation: Marine and Freshwater Ecosystems*, **25**(6): 781-799. <https://doi.org/10.1002/aqc.2466>
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ARTICLES IN PROGRESS

- Hossain MA**, Lahoz-Monfort JJ, Mokany K, Kearney M. (in prep). Estimating and conserving patterns of grasshopper diversity in Western Australia.
- Hossain MA**, Lahoz-Monfort JJ, Kearney M. (in prep). Can species distribution modelling provide insight into adaptive strategies? A test using grasshoppers.
- Hossain MA**, Briones HY, Hoffman A, Kearney MR. (in prep). Factors affecting detectability in a cryptic wingless grasshopper.
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NON-PEER REVIEWED

- Chowdhury GW, **Hossain MA**. 2014. *Coilia dussumierii*. In IUCN Bangladesh 2014. IUCN Red List of Threatened Species. version 3.1.
- Thompson BS, Mohsanin S, Bladon AJ, Fahad ZH, **Hossain MA**. 2012. The Dubla Char Fishery of Bangladesh: WTB/ZSL Report. 23 pp.
- Islam MA (ed.) 2012. Community Conserved Areas in Chittagong Hill Tracts of Bangladesh. Wildlife Trust of Bangladesh, Dhaka. 324 pp.
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- Worked as a **reviewer** for six Wiley and Elsevier journals.
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SCHOLARSHIPS AND AWARDS

2019 BioSciences Research Support Grant (purchase computer, AUD 2,000.00)

2018 Melbourne Research Scholarship (tuition fee remission and living allowance of AUD 105,000 for 3.5 years)

2017 Australian Wildlife Society's University Student Grants winner (AUD 1,500.00, travel grant)

2017 BioSciences Travel Award (AUD 750.00, travel grant)

2017 Drummond Travel Award (AUD 750.00, travel grant)

2017 ICCB Pre-congress workshop scholarship (by SCB-FWWG, AUD 100.00)

2016 Melbourne Research Scholarship (tuition fee remission and living allowance of AUD 54,000 for 2 years)

2016 Joint Meeting of Ichthyologists and Herpetologists (AUD 2,900.00, travel grant)

2015 YPRF Scholarship by American Elasmobranch Society (1-year membership and professional development)

2014 Ayesha Khatun Memorial Gold Medal for obtaining highest GPA in MSc study of Wildlife

2014 General Merit Scholarship by Government of Bangladesh on BSc Honours scores (AUD 76.00)

2014 Student Conference on Conservation Sciences (AUD 688.00, travel grant)

2014 EBL-DUAA Inspiration Scholarship on 4th year BSc Honours scores (AUD 90.00)

2013 Dean's Award on overall academic excellence in BSc Honours Courses (grand reception and a certificate)

2012 National Science and Technology (NST) Fellowship (AUD 981.00, research grant)

CONFERENCE PRESENTATIONS

2022 International Biogeography Society Conference (in Canada, oral presentation - online)

2021 Ecological Society of Australia (in Australia, oral presentation)

2019 & 2021 Australian Entomological Society Conference (in Australia, oral presentation)

2018 Victorian Biodiversity Conference (in Australia, oral presentation)

2017 BioSciences Post-graduate Symposium (in Australia, oral presentation)

2017 & 2021 International Congress for Conservation Biology (in Colombia, oral and poster presentation)

2016 Joint Meeting of Ichthyologists and Herpetologists (in USA, oral presentation, invited for sawfish symposium)

2014 Student Conference on Conservation Science (in China, poster presentation)

EMPLOYMENT

Jun. 2020 – Jul. 2020 Provide admin and professional support during semester 1 exams, University of Melbourne

Mar. 2020 – Jun. 2022 Casual demonstrator in academic teaching for a 3rd year BSc course, University of Melbourne

Oct. 2019 – Jul. 2022 Casual demonstrator in academic teaching for an MSc course, University of Melbourne

AFFILIATIONS

Society for Conservation Biology, Zoological Society of Bangladesh, Ecological Society of Australia, American Elasmobranch Society, Sawfish Conservation Society, Australian Wildlife Society, Australian Entomological Society

LANGUAGE PROFICIENCY English (fluent), Bengali (native)

EXTRA CURRICULAR ACTIVITIES

- Webmaster at qaeco.com (2019 – 2021)
 - Served as an organizing committee member for BioSciences symposium at the University of Melbourne held in 2016
 - Established a library in my village school
 - Blood donation for eight times
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REFEREES

Dr. Michael Kearney

Professor, School of BioSciences, The University of Melbourne, e-mail: m.kearney@unimelb.edu.au

Dr. José Lahoz-Monfort

Senior lecturer in Ecological Modeling, School of BioSciences, The University of Melbourne

e-mail: jose.lahoz@unimelb.edu.au