

ISHAM AZHAR

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EDUCATION

Ph.D. 2019 (Spring) – Present Ph.D. Candidate, Department of Biological Sciences, Texas Tech University, USA

Graduate Advisors: Dr. Tigga Kingston, Dr. Caleb D. Phillips

Dissertation title: Community Processes and Trophic Niche Differentiation in Paleotropical Forest Interior Insectivorous Bat Communities

M.Sc. 2015 (Completed) Zoology, Faculty of Resource Science and Technology, University of Malaysia Sarawak

Graduate Advisor: Dr. Faisal Ali Anwarali Khan

Thesis title: Species Diversity and Host Specificity of Bat Flies (Diptera: Nycteribiidae and Streblidae) in Malaysia

B.Sc. (Hons.) 2011 (Completed) Zoology, Faculty of Resource Science and Technology, University of Malaysia Sarawak

Graduate Advisor: Dato' Dr. Mohd Tajuddin Abdullah

Thesis title: Optimization of Polymerase Chain Reaction (PCR) and Morphometric Analyses of Bamboo Bats (Vespertilionidae: *Tylonycteris* and *Glischropus*)

PUBLICATIONS

Peer-Reviewed Journal

Azhar I, Sihaloho HF, Struebig MJ, Senawi J, Rossiter SJ, Phillips CD, Kingston T. (2026). Community disassembly in a fragmented tropical landscape driven by both deterministic and stochastic processes. *Ecology and Evolution*. 16: e72687. <https://doi.org/10.1002/ece3.72687>

Khan FAA, Morni MA, William-Dee J, Kumaran JV, Jinggong ER, Rajasegaran P, Rosli QS, Mazlan N, Azman WNW, Reli SN, Daud US, Amat A, Bansa LA, Mahyudin A, Hasan NH, Senawi J, **Azhar I**. (2025). First record of *Mops johorensis* (Dobson, 1873), northern free-tailed bat (Chiroptera, Molossidae), from Borneo, with new information on their genetics and echolocation calls. *Check List*. 21(5): 1047-1058. <https://doi.org/10.15560/21.5.1047>

- Baqi A, **Azhar I**, Chen EW, Khan FAA, Lian CJ, Nelson BR, Kumaran JV. (2021). The diversity of small mammals in Pulau Perhentian Kecil, Terengganu, Malaysia. *Journal of Threatened Taxa*. 13(6): 18427-18440. <https://doi.org/10.11609/jott.6148.13.6.18427-18440>
- Yoh N, **Azhar I**, Fitzgerald KV, Yu R, Smith-Butler T, Mahyudin A, Kingston T. (2020). Bat ensembles differ in response to use zones in a tropical biosphere reserve. *Diversity*. 12(2): 60. <https://doi.org/10.3390/d12020060>
- Bansa LA, Rosli QS, Daud US, Amat A, Morni MA, William-Dee J, Jinggong ER, Rajasegaran P, Senawi J, Kuamaran JV, **Azhar I**, Mahyudin A, Hasan NH. (2020). Survey on the small mammals in Kg. Kangkawat Research Station, Imbak Canyon Conservation Area. *Journal of Tropical Biology and Conservation*. 17: 149-163.
- Senawi J, Mahyudin A, Daud US, Amat A, Lagundi S, Gondilang E, Sutail E, Narimin S, **Azhar I**. (2020). Bat diversity in Imbak Canyon Conservation Area: note on their echolocation calls and ectoparasites. *Journal of Tropical Biology and Conservation*. 17: 217-232.
- Khan FAA, Shazali N, Latip N, **Azhar I**. (2019). Into the Heart of Borneo: mammals of upper Baleh, Sarawak. *Journal of Sustainability Science and Management*. 14: 173-182.
- William-Dee, Khan FAA, Rosli Q, Morni MA, **Azhar I**, Lim SL, Tingga RCT, Rahman MRA. (2019). Comparative distribution of small mammal diversity in protected and non-protected areas of Peninsular Malaysia. *Tropical Life Sciences Research*. 30(20): 131-147. <https://doi.org/10.21315/tlsr2019.30.2.10>
- Azhar I**, Mazlan N, Manivannan Y, Rajasegaran P, Khan FAA. (2018). Bat diversity on selected islands at Taman Tun Mustapha, Kudat, Sabah. *Sabah Parks Nature Journal*. 11: 143-156.
- Salor CP, **Azhar I**. (2018). A checklist of bats at Ulu Senagang, Keningau, Sabah. *Journal of Tropical Biology and Conservation*. 15: 163-171.
- Khan FAA, Tahir NFDA, Rahman SPH, Dee JW, Morni MA, Rosli QS, Tingga RCT, Rahman MRA, **Azhar I**. (2017). Small mammals from Samunsam Wildlife Sanctuary, Sarawak, Malaysian Borneo. *Borneo Journal of Resource Science and Technology*. 7: 98-106.
- David G, Lagundi S, **Azhar I**, Abdullah MT. (2017). Birds in Tanjung Mentong, Terengganu, Peninsular Malaysia. *Journal of Wildlife and Parks*. 32: 85-92.

- Pounsins G, Lagundi S, Azhar A, Abdullah MT. (2016). Brief mist-netting and update of new records of bats at Tumunong Hallu, in Silam Coast Conservation Area (SCCA), Lahad Datu, Sabah, Malaysia. *Journal of Tropical Biology and Conservation*. 13: 101-118.
- Morni MA, Tahir NFD, Rosli QS, Dee JW, **Azhar I**, Roslan A, Zahidin MA, Abdullah MT, Khan FAA. (2016). New record of *Rhinolophus chiewkweeae* (Chiroptera: Rhinolophidae) from the east coast of Peninsular Malaysia with new information on their echolocation calls, genetics, and their taxonomy. *Raffles Bulletin of Zoology*. 64: 242-249.
- Kumaran JV, Khan FAA, **Azhar I**, et al. (2016). Diversity and conservation status of small mammals in Kelantan, Malaysia. *Songklanakarinn Journal of Science and Technology*. 38(2): 213-220.
- Shazali N, Rahman SPH, Tahir NFDA, Murni R, Latip NA, Naharuddin NM, **Azhar I**, McArthur E, Khalik MZ, Mohd-Ridwan AR, Khan FAA, Tingga RCT. (2016). Small mammals from Miri, Northeastern Region of Sarawak, Malaysian Borneo: note on new locality records. *Check List*. 12(2): 1863. <http://dx.doi.org/10.15560/12.2.1863>
- Naharuddin NM, Shazali NS, Libar R, Karim NF, Mohd-Ridwan AR, Roslan A, **Azhar I**, Khalik MZ, Khan FAA. (2015). Bats of Bako National Park and additional notes on the rare partial albinism in Fawn Roundleaf Bat (Hipposideridae: *Hipposideros cervinus*). *Borneo Journal of Resource Science and Technology*. 5(2): 44-52.
- Azhar I**, Khan FAA, Ismail N, Abdullah MT. (2015). Checklist of bat flies (Diptera: Nycteribiidae and Streblidae) and their associated bat hosts in Malaysia. *Check List*. 11(5): 1-12. <https://doi.org/10.15560/11.5.1777>
- Sualiman MH, Embong E, Mamat MA, Tahir NFDA, Latip NA, Murni R, **Azhar I**. (2015). Preliminary survey of the bird assemblage at Tanjong Mentong, Lake Kenyir, Hulu Terengganu, Malaysia. *Tropical Natural History*. 15(1): 87-90.
- Azhar I**, Mohd-Ridwan AR, Ho L, Gani M, Yasin SM, Abdullah MT. (2013). A note on bats from Camp 5, Mulu World Heritage Area, Sarawak, Malaysian Borneo. *Malayan Nature Journal*.
- Adrus M, **Azhar I**, Ramji MFS, Daud MHRM, Amran MF, Yasin SM, Abdullah MT. (2013). Rapid assessment of vertebrate fauna in Gunung Ledang National Park, Johor. *Rimba*. 3: n116-122.
- Kumaran JV, Daud SHM, **Azhar I**, Sah SAM, Mokhtar SI, Abdullah MT. (2013). Diversity and conservation status of mammals in Wang Kelian State Park, Perlis, Malaysia. *Check List*. 9(6): 14329-1448.

Kumaran JV, Azhar I, Daud SHM. (2013). A new record of *Chaerephon johorensis* at Mount Jerai, Kedah, Malaysia. *Malayan Nature Journal*. 64(4)/65(1): 233-235.

Rahman MRA, Tawie RC, **Azhar I**, Hasan NH, Lit E, Abdullah MT. (2011). Bats at Wind Cave Nature Reserve, Sarawak, Malaysian Borneo. *Tropical Natural History*. 11(2): 159-175.

Idris I, **Azhar I**. (2010). A short note on the Heterocera of Peninjau, Mount Serambu, Bau, Sarawak: a century after. *Sarawak Museum Journal*. 67(88): 295-301.

Books

Abdullah MT, Hall LS, Khan FAA, **Azhar I**. (2022). Photographic guide to the bats of Malaysia. UMT Publisher: Malaysia.

Book Chapters

Zalipah MN, Roslan A, Senawi J, Kumaran JV, **Azhar I**, Abdullah MT, Lim BL. (2018). Checklist of small mammals of Hulu Terengganu, Terengganu. In: Abdullah MT, Mohammad A, Zalipah MN, Lola MS. (Eds.), Greater Kenyir Landscapes – social development and environmental suitability: from ridge to reef (pp. 191-200). Springer Nature: Switzerland.

Khan FAA, Rahman SPH, Tahir NFDA, Libar R, Khalik MZ, Tuen AA, Mohd-Azlan J, **Azhar I**. (2015). Bats. In: Tuen MA, Das I. (Eds.), Life from headwater to the coast: Tanjung Datu National Park, where Borneo begins. Natural History Publication: Malaysia.

In preparation

Azhar I, Sihaloho HF, De R, Gani M, Senawi J, Yong LS, Ayub Q, Phillips CD, Kingston T. (Anticipated submission date: June 15, 2026). Sensory specialization drives dietary differentiation in niche-packed insectivorous bat assemblages. (Target journal: *Ecology Letters*).

Sihaloho HF, **Azhar I**, Gani M, Senawi J, Yong LS, Ayub Q, De R, Kingston T, Phillips CD. (Anticipated submission date: July 2026). Host and ecological factors, but predominantly diet-derived bacteria, shape the fecal microbiome of insectivorous bats. (Target journal: *Molecular Ecology*).

GRANTS AND FUNDINGS

2023 Bat Conservation International Student Research Scholarship - \$2,991.00

2019 Sarawak Foundation Tun Taib Scholarship - \$69,210.00

PRESENTATION

2026

Azhar I, Sihaloho HF, De R, Gani M, Yong LS, Ayub Q, Senawi J, Phillips CD, Kingston T. Trait-driven dietary partitioning in niche-packed bat communities. Department of Evolution, Ecology and Behavior Symposium, University of Illinois Urbana-Champaign | Online presentation [Invited speaker]

2025

Azhar I. Community disassembly in a fragmented tropical landscape driven by both deterministic and stochastic processes. 2nd Annual Student Scholar C2C Conference | Online presentation.

2024

Azhar I, Sihaloho HF, De R, Gani M, Yong LS, Ayub Q, Senawi J, Phillips CD, Kingston T. Accessing prey by sound: echolocation-driven prey differentiation in insectivorous bat communities. 5th International Southeast Asian Bat Conservation Conference, Saigon, Vietnam | Oral presentation.

Azhar I, Sihaloho HF, Senawi J, Struebig MJ, Phillips CD, Kingston T. Stochastic processes drive community disassembly in a severely fragmented tropical landscape. Ecological Society of America Annual Meeting, Long Beach, California, USA | Oral presentation.

Azhar I, Sihaloho HF, Struebig MJ, Senawi J, Phillips CD, Kingston T. Stochastic processes drive community disassembly in a severely fragmented tropical landscape. Annual Texas Tech Biological Sciences Symposium | Oral presentation.

2023

Azhar I, Sihaloho HF, Senawi J, Phillips CD, Kingston T. Impact of forest fragmentation on Paleotropical insectivorous bat functional diversity. Annual Texas Tech Biological Sciences Symposium | Oral presentation.

Azhar I, Sihaloho HF, Senawi J, Phillips CD, Kingston T. Impact of forest fragmentation on Paleotropical insectivorous bat functional diversity. Texas Society of Mammalogists Annual Meeting, Junction, Texas, USA | Poster presentation.

2022

Azhar I, Sihaloho HF, Senawi J, Phillips CD, Kingston T. Forest fragments contribute to the maintenance of Paleotropical bat functional diversity. Annual Texas Tech Biological Sciences Symposium | Oral presentation.

2020

Azhar I. Functional zones in tropical biosphere reserve protect forest-dependent bat diversity. World Twitter Bat Conference | Online presentation.

2019

Azhar I, Faisal Ali Anwarali Khan, Mohd-Ridwan Abd Rahman, Roberta Chaya Tawie Tingga. Review of bat diversity, distribution, and conservation status in Malaysian Borneo: how much do we know? Annual Texas Tech Biological Sciences Symposium | Oral presentation.

2018

Azhar I, Faisal Ali Anwarali Khan, Mohd-Ridwan Abd Rahman, Roberta Chaya Tawie Tingga. Review of bat diversity, distribution, and conservation status in Malaysian Borneo: how much do we know? 4th International Southeast Asian Bat Conservation Conference, Dumaguete, Philippines | Oral presentation.

Azhar I, Senawi J, Mahyudin A, Daud US, Goundilang E, Narimin S, Sutail E, Lagundi S. Bat diversity in Imbak Canyon Conservation Area. Imbak Canyon Conservation Area Scientific Seminar | Oral presentation.

Azhar I, Mazlan N, Manivannan Y, Rajasegaran P, Khan FAA. Bat diversity at selected islands of Taman Tun Mustapha. Taman Tun Mustapha Scientific Seminar | Oral presentation.

2017

Azhar I, Yu FTT, Sumpangol D, Lapidin J, Sinosun J, Saridan S, Mahyudin A. Bat diversity in Singgaron Baru, Sabah. Singgaron Baru Scientific Seminar | Oral presentation.

2016

Azhar I, Rustin RR, Thessin R, Anil J, Kapar AS, Pious MA, Karim B, Aslie A, Abiri S. Danum Valley Conservation Area Wildlife and Resource Survey: Camp 3. Danum Valley Conservation Area Wildlife and Resources Survey Seminar, Sabah, Malaysia | Oral presentation.

2013

Azhar I, Ismail N, Abdullah MT. Checklist of bat flies (Diptera: *Nycteribiidae* and *Streblidae*) from Tioman Island Wildlife Reserve. Department of Wildlife and National Parks Peninsular Malaysia Biodiversity Seminar | Oral presentation.

Azhar I, Ismail N, Khan FAA, Abdullah MT. Host specificity of bat flies (Diptera: Nycteribiidae and Streblidae) in Malaysia. 3rd International Southeast Asian Bat Conservation Conference, Sarawak, Malaysia | Oral presentation.

2012

Azhar I, Khan FAA, Daud MHRM, Abdullah MT. Species diversity and comparison of bat fauna between Penang and Tioman Islands. Department of Wildlife and National Parks Peninsular Malaysia Biodiversity Seminar | Oral presentation.

Azhar I. Bat research in Malaysia. University of Malaysia Sarawak Colloquium | Oral presentation [Invited speaker]

PRESENTATION (Co-author)

2025

Sihaloho HF, **Azhar I**, De R, Kingston T, Phillips CD. Exogenous variables and an unexpected way diet shapes the insectivorous fecal microbiome. Annual Texas Tech Biological Sciences Symposium | Oral presentation.

2024

De R, Sihaloho HF, **Azhar I**, Kingston T, Gani M, Senawi J, Yong LS, Ayub Q, Phillips CD. How forest characteristics predict insect captures and relate to prey selection in forest-interior bats. Ecological Society of America Annual Meeting, Long Beach, California, USA | Oral presentation.

Sihaloho HF, **Azhar I**, Gani M, Senawi J, Yong LS, Ayub Q, Kingston T, Phillips CD. Optimizing insect metabarcoding. Ecological Society of America Annual Meeting, Long Beach, California, USA | Oral presentation.

2023

Sihaloho HF, **Azhar I**, Kingston T, Phillips CD. Optimizing insect metabarcoding for studies of insectivorous mammal diets. Texas Society of Mammalogists Annual Meeting, Junction, Texas, USA | Poster presentation.

Sihaloho HF, **Azhar I**, Kingston T, Phillips CD. Optimizing insect metabarcoding for studies of insectivorous mammal diets. Annual Texas Tech Biological Sciences Symposium | Oral presentation.

2019

Tleimat J, Adam A, **Azhar I**, Mahyudin A, Fritts S. Winners and losers: small mammal responses to tropical land use change. Texas Chapter of the Wildlife Society Annual Meeting, Montgomery, Texas, USA | Poster presentation.

Tleimat J, Adam A, **Azhar I**, Mahyudin A, Fritts S. Winners and losers: small mammal responses to tropical land use change. Texas Society of Mammalogists Annual Meeting, Junction, Texas, USA | Poster presentation.

2015

Tahir NFD, Rahman SPH, McArthur E, **Azhar I**, Morni MA, Abdullah MT, Mohd-Ridwan AR, Hashim R, Tingga RCT. Value of acoustic measures in identifying cryptic bat species: a myth or reality? 8th UNIMAS Research and Development Expo, Sarawak, Malaysia | Poster presentation.

McArthur E, Schöner MG, Schöner CR, Shazali N, Ermisch R, Dombrowski L, **Azhar I**, Khan FAA. Echolocation calls of insectivorous bats in Gunung Mulu National Park, Sarawak, Malaysian Borneo. The Association of Tropical Biology and Conservation, Phnom Penh, Cambodia | Poster presentation.

2014

Rahman SPH, Shazali N, Tahir NFD, **Azhar I**, Mohd-Azlan J, McArthur E, Abdullah MT, Tingga RCT, Mohd-Ridwan AR, Khan FAA. Discovering geographic variation in echolocation calls of Roundleaf and Horseshoe bats (Genus: *Hipposideros* and *Rhinolophus*). BioBorneo, Sarawak, Malaysia | Poster presentation.

PROFESSIONAL EXPERIENCE AND SERVICES

Employment

- 2019-** **Graduate Teaching Assistant**, Department of Biological Sciences, Texas Tech University
- 2019-2024** **Graduate Research Assistant**, Department of Biological Sciences, Texas Tech University | NSF-funded
- 2017-2018** **Instructor**, National Science Foundation International Research Experiences for Students – Invited
- 2015-2018** **Head of Program and Senior Lecturer**, Faculty of Natural Science and Sustainability, University College Sabah Foundation
- 2014** **Research Associate**, Center of Kenyir Ecosystems, Kenyir Research Institute, University of Malaysia Terengganu

2012-2015 **Research Associate**, Southeast Asian Mammalian Systematics and Evolution Lab, University of Malaysia Sarawak

Services

- 2024** Steering Committee Member, Southeast Asian Bat Conservation Research Unit (SEABCRU) Annual Meeting, Saigon, Vietnam
- 2017-2018** Guest Instructor, Tropical Biology Association (TBA)
- 2018** Contributor, IUCN Red List of Threatened Species Assessment
- 2018** Steering Committee Member, Southeast Asian Bat Conservation Research Unit (SEABCRU) Annual Meeting, Dumaguete, Philippines
- 2017** Representative of University College Sabah Foundation, Sabah Foundation Conservation Area Management Committee
- 2016** Field Team Leader (Camp 3), Danum Valley Conservation Area Wildlife and Resource Survey, Sabah Foundation.
- 2013** Organizing Committee, 3rd International Southeast Asian Bat Conservation Conference, Sarawak, Malaysia

RESEARCH EXPERIENCE

- 2019-** **Dissertation research: Community Processes and Trophic Niche Differentiation in Paleotropical Forest Interior Insectivorous Bat Communities**
- 2026** **Project title: Mosquito Community Dynamics in Lubbock, Texas**
- Collaborated and assisted a MS.c. student in data analyses and interpretation
- 2025-** **Project title: Community Assembly of Rodent Communities Across an Elevational Gradient in Bolivia**
- Collaborated and assisted a Ph.D. student in data analysis and interpretation
- 2023** **Project title: Factors Affecting Space Use, Habitat Use, and Landscape Connectivity for Sonoran Desert Tortoises (*Gopherus morafkai*) in Southern Arizona**
- Assisted a Ph.D. student with radio-telemetry monitoring of Sonoran tortoises and retrieval of GPS tracking devices for movement data collection
- 2011-2014** **Thesis title: Species Diversity and Host Specificity of Bat Flies (Diptera: Nycteribiidae and Streblidae) in Malaysia**
- 2007-2024** Contributed to >40 biodiversity and ecological surveys across vertebrate taxa in collaboration with government agencies and academic institutions. This

includes training students and field personnel in field sampling and data collection procedures.

TEACHING EXPERIENCE

- 2015-2018** NSS2013 Introduction to Earth Systems Science
NRC3122 Principle of Sustainability and Ecosystem Science
SRC3153 Population and Community Ecology
SRC4233 Molecular Ecology and Conservation Genetics
SRC4253 Wildlife Ecology and Management
SSF0043 Earth Science
SSF0063 Diversity of Life
SSF0082 Ethics in Science
SSS3176 Introduction to Research and Interdisciplinary Field Course
- 2019, 2025** BIOL1402 Biology of Animals
- 2020-2025** BIOL1403 Biology I
- 2020-2026** BIOL1404 Biology II

OUTREACH AND ENGAGEMENT

- 2018** SEABCRU Outreach Program, Carlos Hilado Memorial State College, Dumaguete, Philippines.
- 2013** Community engagement and outreach on bat conservation and ecology, Batu Bungan Government Primary School, Mulu World Heritage Area, Sarawak, Malaysia.
- 2009** Animal husbandry and veterinary intern, Zoo Taiping and Night Safari, Malaysia

AWARDS AND HONORS

- 2023** Vernon Bailey Award – Best Poster Presentation in Classical Mammalogy at the Organismal Level. Texas Society of Mammalogists Annual Meeting.
- 2015** Silver Award, 8th UNIMAS Research and Development Expo, Sarawak, Malaysia
- 2013** Best Oral Presentation. 3rd International Southeast Asian Bat Conference.