Maya M. Juman

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EDUCATION

Ph.D. in Biological Sciences, Gates Cambridge Scholar 2022 – (Expected 2026)
University of Cambridge

B.S. in Ecology & Evolutionary Biology, *magna cum laude*, with distinction (3.91/4.00) 2020
Yale University

PEER-REVIEWED PUBLICATIONS

10. Betke, B.A., **Juman, M.M.**, O'Shea, M., Fagre, A., Frank, H., Becker, D.J., Poisot, T. (*in review*) Why don't bats get sick from viruses? *Frontiers in Young Minds.*

9. **Juman, M.M.**, Restif, O., Becker, D.J. (*in review*) Paramyxoviruses in Old World fruit bats (Pteropodidae): an open database and synthesis of sampling effort, viral positivity, and coevolution. *PLOS Pathogens*. Preprint: https://doi.org/10.1101/2025.03.10.642350.

8. **Juman, M.M.**, Gibson, L., Suu-Ire, R.D., Languon, S., Quaye, O., Fleischer, G., Asumah, S., Jolma, E.R., Gautam, A., Sterling, S.L., Yan, L., Broder, C.C., Laing, E., Wood, J.L.N., Cunningham, A.A., Restif, O. (2024*)* Ecological and reproductive cycles drive henipavirus seroprevalence in the African Straw-Coloured Fruit Bat (*Eidolon helvum*). *Ecology and Evolution* 14: e70555.

7. Olson, L.E., **Juman, M.M.** (2024) Host taxonomy is critical in zoonotic disease surveillance and reporting. *Journal of Wildlife Diseases* 60: 554-555.

6. **Juman, M.M.**, Olson, L.E., Sargis, E.J. (2024) Craniometric variation and taxonomic boundaries in the Madras Treeshrew (Scandentia, Tupaiidae: *Anathana ellioti* Waterhouse, 1850) from India. *Journal of Mammalian Evolution* 31:4.

5. **Juman, M.M.**, Woodman, N., Miller-Murthy, A., Olson, L.E., Sargis, E.J. (2022) Taxonomic boundaries in Lesser Treeshrews (Scandentia, Tupaiidae: *Tupaia minor* Günther, 1876). *Journal of Mammalogy* 103: 1431-1440.

4. **Juman, M.M.**, Millien, V., Olson, L.E., Sargis, E.J. (2022) Recent and rapid ecogeographical rule reversals in Northern Treeshrews. *Scientific Reports* 12: 19689.

3. **Juman, M.M.**, Olson, L.E., Sargis, E.J. (2021) Skeletal variation and taxonomic boundaries in the Pen-tailed Treeshrew (Scandentia, Ptilocercidae: *Ptilocercus lowii* Gray, 1848). *Journal of Mammalian Evolution* 28: 1193-1203.

2. **Juman, M.M.**, Woodman, N., Olson, L.E., Sargis, E.J. (2021) Ecogeographic variation and taxonomic boundaries in Large Treeshrews (Scandentia, Tupaiidae: *Tupaia tana* Raffles, 1821) from Southeast Asia. *Journal of Mammalogy* 102: 1054-1066.

1. Ruane, S., Myers, E.A., Lo, K., Yuen, S., Welt, R.S., **Juman, M.M.**, Futterman, I., Nussbaum, R.A., Schneider, G., Burbrink, F.T., Raxworthy, C.J. (2018) Unrecognized species diversity and new insights into colour pattern polymorphism within the widespread Malagasy snake *Mimophis* (Serpentes: Lamprophiidae). *Systematics and Biodiversity* 16: 229-244.

RESEARCH PRESENTATIONS (*TRAVEL AWARD RECIPIENT)

9. **Juman, M.M.**, McDonough, M.M., Ferguson, A.W., Han, B.A., Becker, D.J. Model-guided paramyxovirus discovery in museum bat collections. BatID 2025: International Symposium on the Infectious Diseases of Bats, Chicago (upcoming).

8. **Juman, M.M.***, McDonough, M.M., Ferguson, A.W., Han, B.A., Becker, D.J. Model-guided paramyxovirus discovery in museum bat collections. American Society of Mammalogists, West Lafayette, Indiana (upcoming).

7. **Juman, M.M.***, Han, B.A., Becker, D.J. Model-guided henipavirus discovery in museum bat collections. Hendra@30: Henipavirus International Conference, Geelong, Australia (12/9/2024).

6. **Juman, M.M.** Museums, Microbes, and the Machine: AI-driven pathogen surveillance in natural history collections. "Zoonotic Collecting": The Fourth Annual Conference of The Global War Against the Rat and the Epistemic Emergence of Zoonosis, St Andrews, Scotland (6/25/2024).

5. **Juman, M.M.**, Restif, O. Seasonal and spatial patterns of henipavirus seroprevalence in Straw-Coloured Fruit Bats (*Eidolon helvum*). British Ecological Society Annual Meeting, Belfast, Northern Ireland (12/15/2023).

4. **Juman, M.M.***, Millien, V., Olson, L.E., Sargis, E.J. Recent and rapid ecogeographical rule reversals in Northern Treeshrews. International Mammalogical Congress 13, Anchorage, AK (7/14/2023).

3. **Juman, M.M.***, Woodman, N., Miller-Murthy, A., Olson, L.E., Sargis, E.J. Taxonomic boundaries in Lesser Treeshrews. American Society of Mammalogists, virtual (6/18/2022).

2. **Juman, M.M.***, Olson, L.E., Sargis, E.J. Skeletal variation and taxonomic boundaries in the Pen-tailed Treeshrew. American Society of Mammalogists, virtual (6/15/2021).

1. **Juman, M.M.**, Woodman, N., Olson, L.E., Sargis, E.J. Hand proportions and taxonomic boundaries among Large Treeshrews. American Society of Mammalogists, Washington, D.C. (6/29/2019).

IUCN RED LIST ASSESSMENTS

Juman, M.M., Sargis, E.J., Talmale, S.S. (2024) *Anathana ellioti*. The IUCN Red List of Threatened Species.
Juman, M.M., Sargis, E.J. (2023) *Tupaia belangeri*. The IUCN Red List of Threatened Species.
Juman, M.M., Sargis, E.J. (2023) *Tupaia minor*. The IUCN Red List of Threatened Species.
Juman, M.M., Sargis, E.J. (2023) *Ptilocercus lowii*. The IUCN Red List of Threatened Species.
Juman, M.M., Sargis, E.J. (2023) *Tupaia tana*. The IUCN Red List of Threatened Species.

FELLOWSHIPS AND RESEARCH GRANTS

Accelerate-C2D3 (Cambridge Centre for Data-Driven Discovery) Extension Grant (£10,000)	2025
Graduate Research Grant, Selwyn College, University of Cambridge (£400)	2024
Graduate Field Work Grant, Department of Veterinary Medicine, University of Cambridge (£2,600)	2024
James L. Patton Award for Museum-Based Research, American Society of Mammalogists ($5,000)	2024
Verena (Viral Emergence Research Initiative) Fellow-in-Residence Award ($5,000)	2024
Accelerate-C2D3 (Cambridge Centre for Data-Driven Discovery) Research and Innovation Grant (£9,303)	2023
Gates Cambridge Scholarship (full PhD tuition + £21,000/year stipend)	2022 – 2026
NSF Graduate Research Fellowship ($138,000, *declined*)	2022 – 2027
Fulbright U.S. Student Research Fellowship to Malaysia ($18,000, *postponed due to COVID-19*)	2021– 2022
Dean's Research Fellowship in the Sciences, Yale University ($4,300)	2019
Alan S. Tetelman Fellowship for International Research in the Sciences, Yale University ($3,600)	2019
Yale Summer Environmental Fellowship, Yale School of the Environment ($2,000)	2019
Richter Summer Fellowship, Saybrook College, Yale University ($1,000)	2019
Karen L. Von Damm Undergraduate Research Fellowship, Yale Earth & Planetary Sciences ($3,784)	2017

HONORS AND AWARDS

Abcam Research Prize, Department of Veterinary Medicine, University of Cambridge (£250)	2025
Best Poster Award and Best Flash Talk Award, Department of Veterinary Medicine, University of Cambridge	2025
Travel Award, American Society of Mammalogists ($800)	2025
Best Poster Award, Cambridge Infectious Diseases Annual Symposium	2025
Travel Award, American Society of Mammalogists ($600)	2023
Travel Award, American Society of Mammalogists ($400)	2022
Travel Award, American Society of Mammalogists ($200)	2021
Y-Work Award for Outstanding Student Employees, Yale University	2020
Undergraduate Research Honorarium, American Society of Mammalogists ($1,200)	2019

TEACHING

Part II Zoology: Mammal Evolution and Comparative Anatomy, University of Cambridge — 2023, 2024, 2025
Supervisor (led specimen-based small group teaching for third-year undergraduates, provided writing feedback)

Pegasus Bridging Programme, Robinson College, University of Cambridge — September 2024
Supervisor (led personalized museum tours for incoming undergraduates in college preparation program)

Part I Pathology: Mathematical Biology, University of Cambridge — May 2023
Demonstrator (assessed students' R code for a practical assignment on epidemiological modeling)

S&DS S230: Data Analysis and Exploration, Yale University — Summer 2020
Teaching Assistant (held office hours, graded assignments, demonstrated R code)

ANTH S242: Human Evolutionary Biology, Yale University — Summer 2020
Writing Fellow (served as primary writing resource for 90 students)

Yale College Writing Center, Yale University — 2017 – 2020
ESL-Certified Writing Partner (held weekly drop-in hours and provided feedback to non-native English writers)

SCIENCE COMMUNICATION AND OUTREACH

Cambridge Science Festival — March 2023, 2024, 2025
Activity organizer (designed and ran a "bat virus hunting" activity for families visiting the veterinary school)

Skype a Scientist — 2023 – Present
Guest scientist (discuss research and STEM careers with K-12 science students in the U.S., Ireland, and Europe)

Women of Color in Ecology and Evolutionary Biology Mentor Match (wocineeb.org) — 2023 – Present
Mentor (run quarterly check-in meetings with undergraduate and graduate students from Singapore and Brazil)

Ecology and Evolutionary Biology Mentor Match (eebmentormatch.com) — 2022 – Present
Mentor (provide personalized feedback to U.S. undergraduate students applying to graduate school and fellowships)

Letters to a Pre-Scientist — 2021 – Present
STEM pen pal (write bilingual science-themed letters to middle schoolers in underserved U.S. school districts)

Alumni Career Panels, American Museum of Natural History — 6/22/2019, 9/10/2021, 9/30/2022
Panelist (spoke about college admissions, academic career paths, and research with NYC high schoolers)

Yale Ecology & Evolutionary Biology Undergraduate Group — 2019 – 2020
Co-President and Peer Mentor (organized research panels, social events, and workshops for students)

"Inkredible: A Cephalopodcast," published on Spotify (*inkrediblepod.wordpress.com*) — 2019
Hosted and produced an original podcast episode about biological ink, accompanied by a website.

"The Taming of the Treeshrew" (tamingofthetreeshrew.wordpress.com) — 2018
Maintained a blog documenting collections-based research experiences at Yale and the Smithsonian.

EMPLOYMENT

COVID-19 Response Coordinator, Philadelphia Department of Public Health (full-time job) — 2020 – 2022
- *Supervised a team of contact tracers and investigated high-risk COVID-19 clusters.*
- *Designed monthly software updates to streamline the collection and management of epidemiological data.*
- *Synthesized and presented weekly patterns to Chief of Operations and Philadelphia Health Commissioner.*

Tour Guide and Collections Assistant, Yale Peabody Museum of Natural History (part-time job) — 2016 – 2020
- *Led weekly behind-the-scenes tours to encourage public engagement with the museum's collections and research.*
- *Digitized 6,573 invertebrate and vertebrate fossils for the NSF Cretaceous World Project.*

UNDERGRADUATE RESEARCH STUDENTS MENTORED

Alice Patton, Princeton University *(provided training in R-based mathematical modeling for research internship)* — 2024
Lewis Drummond, University of Cambridge *(direct supervisor for Part II research project)* — 2023 – 2024
Gabrielle Roman, Yale University *(provided training in R-based multivariate analyses for research internship)* — 2023
Katie Handler, Yale University *(provided training in R-based multivariate analyses for senior thesis)* — 2022

INVITED TALKS AND PANELS

"Model-guided paramyxovirus discovery in museum bat collections" — 1/28/2025
Holleley Lab, Australian National Wildlife Collection (CSIRO)

"Ecological and reproductive cycles drive henipavirus seroprevalence in *Eidolon helvum*" — 11/19/2024
Peel Lab, Griffith University

"Model-guided paramyxovirus discovery in museum bat collections" — 9/5/2024
Brook Lab, University of Chicago

"Recent and rapid ecogeographical rule reversals in Northern Treeshrews" — 12/7/2022
Olson Lab, University of Alaska Fairbanks

"Viruses, variants, virulence: lessons from ecology and evolution" — 1/25/2022
Philadelphia Department of Public Health

"Scientific and cultural uses of cephalopod ink" — 2/13/2020
Yale Peabody Museum of Natural History (first undergraduate student to deliver a public gallery talk)

PROFESSIONAL SERVICE

***Reviewer*:** *Biological Conservation, Biological Journal of the Linnean Society, Health Science Reports, iScience, Journal of Mammalogy, Philippine Journal of Science, PLoS ONE, Proceedings of the Royal Society B, Scientific Reports*

Member:

- IUCN Species Survival Commission Small Mammal Specialist Group (2024–)
- *Journal of Mammalogy* Instructions to Authors/Style Guide Committee (2024–)
- Viral Emergence Research Initiative (2024–)
- Cambridge Collections Connections Communities (CCC) Consortium (2025–)

Team Leader, Bat Pathogen Spillover Compendium, Johns Hopkins University 2023 – Present

- Work with a consortium of disease ecologists to review scientific papers on bat virus spillover for a publicly available, expert-curated database to be launched Spring 2025. Team lead for Bangladesh Nipah virus papers.

Species Page Contributor, India Biodiversity Portal (*indiabiodiversity.org*) 2022 – Present

- Validate and identify observations of Scandentia (treeshrews) in an open citizen science database.
- Founder and administrator of the Small Mammals of India microsite.

OTHER SKILLS AND EXPERIENCE

Museum work:

- *Research internships*: American Museum of Natural History (2014-2016, Herpetology); Smithsonian National Museum of Natural History (2018, Mammalogy); Yale Peabody Museum of Natural History (2018, Mammalogy)
- *Collection visits*: Smithsonian National Museum of Natural History (2019); Harvard Museum of Comparative Zoology (2019); Yale Peabody Museum of Natural History (2019); Field Museum of Natural History (2019, 2024); Natural History Museum, London (2019, 2023); American Museum of Natural History (2019)
- *Employment*: Yale Peabody Museum of Natural History (2016-2020, Invertebrate and Vertebrate Paleontology Collections Assistant); University of Alaska Museum (2022–, Mammalogy Research Technician)

Field work:

- *Queensland and New South Wales, Australia*: Under-roost urine and fecal sampling of flying foxes for seasonal Hendra virus surveillance (November 2024).
- *Chicago, USA*: Mark-release-recapture urban ecology study of deer mice bacterial pathogens (September 2024).
- *Southeast Alaska, USA*: Collected hoary marmots and bumble bees from remote alpine regions for the University of Alaska Museum. Conducted orthopoxvirus surveillance in hoary marmot populations in collaboration with the Alaska State Department of Public Health and U.S. Centers for Disease Control (July 2022, July 2023).

Editorial work:

- *Editor-in-Chief*, The Scholar (*thescholar.online* and Spotify): Oversaw the production of the Gates Cambridge annual magazine, featuring articles, photos, videos, and podcasts by current students and alumni (2022–2023).

Languages: English, Spanish (proficient), Hindi (read/write), Malayalam (read/write)

Software: R, Python, ArcGIS, EMu, FileMaker, ImageJ, Adobe InDesign, and Photoshop

Laboratory: Cryogenic tissue subsampling, RNA extraction, RT-PCR, gel electrophoresis, Sanger sequencing

Professional affiliations:

- American Society of Mammalogists (2019–)
- British Ecological Society (2022–)