

# Maya M. Juman

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## EDUCATION

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**Ph.D. in Biological Sciences**, Gates Cambridge Scholar Fall 2022 – Present  
Department of Veterinary Medicine, University of Cambridge

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

## PEER-REVIEWED PUBLICATIONS

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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)

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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).

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).

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).

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).

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

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

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

## IUCN RED LIST ASSESSMENTS

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**Juman, M.M.**, Sargis, E.J., Talmale, S.S. (*accepted*) *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, GRANTS, AND AWARDS

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Graduate Research Grant (£400), Selwyn College, University of Cambridge	2024
Field Work Fund (£2,600), Department of Veterinary Medicine, University of Cambridge	2024
James L. Patton Award (\$5,000), American Society of Mammalogists	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, <i>declined</i> )	2022
Fulbright U.S. Student Research Fellowship to Malaysia (\$18,000, <i>postponed due to COVID-19</i> )	2021
Y-Work Award for Outstanding Student Employees, Yale University	2020
Undergraduate Research Honorarium (\$1,200), American Society of Mammalogists	2019
Dean's Research Fellowship in the Sciences (\$4,300), Yale University	2019
Alan S. Tetelman Fellowship for International Research in the Sciences (\$3,600), Yale University	2019
Yale Summer Environmental Fellowship (\$2,000), Yale School of the Environment	2019
Richter Summer Fellowship (\$1,000), Saybrook College, Yale University	2019
Karen L. Von Damm Undergraduate Research Fellowship (\$3,784), Yale Earth & Planetary Sciences	2017

## TEACHING

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

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

**Part I Pathology: Mathematical Biology**, University of Cambridge Easter Term 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 tutoring hours and provided feedback to non-native English writers)*

## SCIENCE COMMUNICATION

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- Contributor**, Bat Pathogen Spillover Compendium, Johns Hopkins University 2023 – Present
- Work with a team of disease ecologists to review scientific papers on bat virus spillover for a publicly available, expert-curated database (to be launched in 2024).
- Species Page Contributor**, India Biodiversity Portal ([indiabiodiversity.org](http://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.
- 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 Peabody’s collections and research.
  - Digitized 6,573 invertebrate and vertebrate fossils for the NSF Cretaceous World Project.
- Podcast Host and Producer**, “Inkredible: A Cephalopodcast,” published on SoundCloud, Apple, and Spotify 2019
- Created an original episode about biological ink, accompanied by a website ([inkrediblepod.wordpress.com](http://inkrediblepod.wordpress.com)).
- Writer**, “The Taming of the Treeshrew” ([tamingofthetreeshrew.wordpress.com](http://tamingofthetreeshrew.wordpress.com)) 2018
- Maintained a blog documenting collections-based research experiences at Yale and the Smithsonian.

## OUTREACH

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- Cambridge Science Festival** March 2023, 2024  
*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 career pathways with K-12 science students in the U.S. and U.K.)*
- Women of Color in Ecology and Evolutionary Biology Mentor Match** ([wocineeb.org](http://wocineeb.org)) 2023 – Present
- Ecology and Evolutionary Biology Mentor Match** ([eebmentormatch.com](http://eebmentormatch.com)) 2022 – Present  
*Mentor (provide personalized feedback to 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 opportunities 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)*

## PUBLIC SERVICE

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- 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.

## UNDERGRADUATE RESEARCH STUDENTS MENTORED

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- 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

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“Ecological and reproductive cycles drive henipavirus seroprevalence in <i>Eidolon helvum</i> ” <i>Peel Lab, Griffith University</i>	11/19/2024
“Model-guided paramyxovirus discovery in museum bat collections” <i>Brook Lab, University of Chicago</i>	9/5/2024
“Recent and rapid ecogeographical rule reversals in Northern Treeshrews” <i>Olson Lab, University of Alaska Fairbanks</i>	12/7/2022
“Viruses, variants, virulence: lessons from ecology and evolution” <i>Philadelphia Department of Public Health</i>	1/25/2022
“Scientific and cultural uses of cephalopod ink” <i>Yale Peabody Museum of Natural History (first undergraduate student to deliver a public gallery talk)</i>	2/13/2020

## OTHER SKILLS AND EXPERIENCE

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### 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:

- *Committee member*, Journal of Mammalogy ad hoc Instructions to Authors committee (2024).
- *Editor-in-Chief*, The Scholar ([thescholar.online](https://thescholar.online) and [Spotify](https://open.spotify.com/)): Oversaw the production of the Gates Cambridge annual magazine, featuring articles, photos, videos, and podcasts by current scholars and alumni (2022–2023).

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

**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–), IUCN SSC Small Mammal Specialist Group (2024–)