

Miranda Margulis-Ohnuma

miranda.margulis-ohnuma@yale.edu | 646-745-5267

EDUCATION

- In progress Ph.D., Earth and Planetary Sciences, Yale University
Advisor: Bhart-Anjan Bhullar
- 2024 B.S., Earth and Planetary Sciences, Yale University
Paleontology & Geobiology concentration, *cum laude*, distinction in the major
[Thesis](#): Integrating GM and XROMM illuminates the role of the quadrate as a
keystone of cranial kinesis

HONORS, AWARDS, AND FELLOWSHIPS

- 2024-2029 Graduate Research Fellowship, National Science Foundation
- 2024 Centennial Fellowship in the Natural Sciences, Princeton University (*declined*)
- 2024 AMNH Graduate Student Ph.D. Fellowship, Columbia University (*declined*)
- 2024 Hammer Prize “for excellence in the oral presentation of the Senior Thesis,” Yale
- 2023 William R. Belknap Prize “to a senior for excellence in geological studies,” Yale
- 2023 Undergraduate Excellence in Paleontology Award Honorable Mention,
Association for Women Geoscientists/Paleontological Society
- 2021-2023 Karen L. Von Damm ’77 Undergraduate Research Fellowship, Yale
- 2019 3rd place, Regeneron Westchester Science & Engineering Fair (WESEF)
- 2019 Association for Women Geoscientists Award, Regeneron WESEF
- 2019 NASA Earth System Science Award, Regeneron WESEF

PEER-REVIEWED PUBLICATIONS

*denotes equal contribution

3. Johnson, E., **Margulis-Ohnuma, M.**, Smith, T. J., Lutz, C., Briggs, D. E. G. (2024). Morphotype Matters: An experimental analysis of the morphological fidelity of gastropod steinkerns. *PALAIOS*, 39(7), 225–232. <https://doi.org/10.2110/palo.2023.041>
2. *Smith, J., *Rillo, M. C., *Kocsis, Á. T., Dornelas, M., Fastovich, D., Huang, H.-H. M., Jonkers, L., Kiessling, W., Li, Q., Liow, L. H., **Margulis-Ohnuma, M.**, Meyers, S., Na, L., Penny, A. M., Pippenger, K., Renaudie, J., Saupe, E. E., Steinbauer, M. J., Sugawara, M., Tomasovych, A., Williams, J. W., Yasuhara, M., Finnegan, S., & Hull, P. M. (2023). BioDeepTime: A database of biodiversity time series for modern and fossil assemblages. *Global Ecology and Biogeography*, 32(10), 1680–1689. <https://doi.org/10.1111/geb.13735>
1. **Margulis-Ohnuma, M.**, Whiteside, J., & Olsen, P. (2021). Strong inclination pacing of climate in Late Triassic low latitudes revealed by the Earth-Saturn tilt cycle. *The Yale*

PUBLISHED ABSTRACTS

9. **Margulis-Ohnuma, M.**, Manafzadeh, A. R., Brainerd, E. L., Bhullar, B.-A. S. (2023). Integrating GM and XROMM illuminates the role of the quadrate as a keystone of cranial kinesis. *SICB 2024*, 1057.
8. Kinney, S., Chang, C., Tibbits, D., Setera, K., Cannato, J., Danyi, C., Galletta, A., **Margulis-Ohnuma, M.**, Geraldles, M., McCracken, R., Pinnella, M., Prabhakar, L., Slibeck, B. B., Stempkovski, I., Witkowski, R., Browning, J. V., Godfrey, L., Miller, K., Olsen, P. E. (2023). Legacy continental records from the rifted Eastern North American Margin (ENAM) are a community resource providing unparalleled opportunities for study of the interplay between the solid earth, climate, biotic evolution and the solar system dynamics during the Mesozoic. *AGU Fall Meeting 2023*, T12A-06.
7. **Margulis-Ohnuma, M.**, Ruebenstahl, A. A., Bhullar, B.-A. S. (2023). A new crocodylomorph from the Carnian Ghost Ranch Formation with implications for the Solidocranian ghost lineage. *SVP Annual Meeting 2023*, 3931262.
6. **Margulis-Ohnuma, M.**, Chang, C., Whiteside, J. H., & Olsen, P. E. (2022). Toward a Carnian astrochronology in the paleoequatorial Richmond Rift Basin (VA) using XRF geochemistry. *GSA Connects 2022*, 377558. <https://doi.org/10.1130/abs/2022AM-377558>
5. Smith, J., Rillo, M., Kocsis, Á., Finnegan, S., Hull, P. M., Dornelas, M., Fastovich, D., Huang, H.-H. M., Kiessling, W., Liow, L. H., **Margulis-Ohnuma, M.**, Meyers, S., Penny, A. M., Pippenger, K., Renaudie, J., Saupe, E., Steinbauer, M. J., Sugawara, M., Tomasovych, A., ... Yasuhara, M. (2022). BioDeepTime version 1.0: A new database of biodiversity time series for the Cenozoic. *GSA Connects 2022*, 383239. <https://doi.org/10.1130/abs/2022AM-383239>
4. Tomasovych, A., Dornelas, M., Fastovich, D., Finnegan, S., Huang, H.-H. M., Hull, P. M., Kiessling, W., Kocsis, Á., Liow, L. H., **Margulis-Ohnuma, M.**, Meyers, S., Penny, A. M., Pippenger, K., Renaudie, J., Rillo, M., Saupe, E., Smith, J., Steinbauer, M. J., Sugawara, M., ... Williams, J. (2022). Scale dependency of temporal turnover in community composition in the fossil record. *GSA Connects 2022*, 381451. <https://doi.org/10.1130/abs/2022AM-381451>
3. **Margulis-Ohnuma, M.**, Whiteside, J., & Olsen, P. (2021). Strong inclination pacing of climate in Late Triassic low latitudes revealed by the Earth-Saturn tilt cycle. *EGU General Assembly 2021*, 6638. <https://doi.org/10.5194/egusphere-egu21-6638>
2. Whiteside, J., Schaller, M., Olsen, P., **Margulis-Ohnuma, M.**, & Yager, J. (2021). An overture to the Anthropocene: Isotopic evidence of strong CO₂ modulation of the tropical monsoon at the dawn of dinosaurs. *30th International Meeting on Organic Geochemistry (IMOG 2021)*, 1–2. <https://doi.org/10.3997/2214-4609.202134243>

- Whiteside, J. H., **Margulis-Ohnuma, M.**, Schaller, M. F., Irmis, R. B., & Glasspool, I. (2018). Extensive wildfires driven by high pCO₂ in the Late Triassic. *AGU Fall Meeting 2018*, PP43B-01. <https://ui.adsabs.harvard.edu/abs/2018AGUFMPP43B..01W>

TEACHING AND MENTORSHIP

In progress	Certificate of College Teaching Preparation, <i>Yale Poorvu Center</i> Fundamentals of Equitable Teaching workshop, September 2024 Grading & Values Learning Community, November 2024
2024-2025	Graduate Museum Educator, <i>Yale Peabody Museum</i>
2023	Undergraduate Learning Assistant, <i>Statistics and Data Science</i> Introduction to Statistics, S&DS 100, Fall 2023 Data Exploration and Analysis, S&DS 230, Spring 2023
2023	Sci.CORPS supervisor, <i>Yale Peabody Museum</i>
2023	EVOLUTIONS guest instructor, <i>Yale Peabody Museum</i>

SERVICE

2024	Volunteer, <i>Yale Pathways to Science</i> Girls' Science Investigations, September 2024 West Campus Science Festival, October 2024
2024	Scientists in the Galleries volunteer, <i>Yale Peabody Museum</i> "I'm a paleontologist, ask me anything!" October 2024
2024-2025	Graduate Affiliate, <i>Berkeley College</i>
2024	Leadership committee, <i>Women in EPS at Yale</i>

RESEARCH SKILLS

Techniques: CT scanning and segmentation, microscopy (slide-scanning, 3D, confocal, lightsheet), phylogenetic analysis, time series analysis, linear and geometric morphometrics, XROMM data processing, XRF, mass spectrometry, photography, basic field techniques, basic wet lab techniques

Software: VG Studio, Autodesk Maya, Blender, Geomagic, Mesquite, TNT, MrBayes, Acycle, XMALab, Microsoft Office, Adobe Illustrator, Adobe Photoshop, R

FIELDWORK

2022	New York state: 2 weeks, Devonian sedimentology and trace fossils
2017	Ghost Ranch, New Mexico: 1 week, Triassic sedimentology and fossil excavation

SELECTED COURSEWORK

Paleontology: Natural History of Reptiles and Amphibians (EPS 530), Extraordinary Glimpses of Past Life (EPS 355), Paleoecology (EPS 345), Vertebrate Paleontology (EPS 325)

Biology: Molecular Cell Biology (MCDB 602), Phylogenetic Biology (E&EB 354), Evolutionary Genetics (E&EB 322), Comparative Physiology (E&EB 295), Comparative Anatomy of Vertebrates (E&EB 290 & 291 Lab), Ornithology (E&EB 272 & 273 Lab), Evolutionary Biology (E&EB 225)

Earth Science: Isotope Geochemistry (EPS 310), Earth Surface Processes (EPS 232), Biological Oceanography (E&EB 275)

External: Incorporated Research Institutions for Seismology (IRIS) Seismology Skill Building Workshop for Undergraduates (2020)

AFFILIATIONS

Society of Vertebrate Paleontology

Society for Integrative and Comparative Biology

Women in Science at Yale

Yale Science Communication