

PROMOTION RECOMMENDATION
The University of Michigan
College of Literature, Science, and the Arts

Matt Friedman, associate professor of Earth and environmental sciences, with tenure, College of Literature, Science, and the Arts, is recommended for promotion to professor of Earth and environmental sciences, with tenure, College of Literature, Science, and the Arts.

Academic Degrees:

Ph.D.	2009	University of Chicago
S.M.	2005	University of Chicago
M.Phil.	2004	University of Cambridge
B.S.	2002	University of Rochester

Professional Record:

2018-present	Director, Museum of Paleontology, University of Michigan
2016-present	Associate Curator, Museum of Paleontology, University of Michigan
2016-present	Associate Professor, Department of Earth and Environmental Sciences, University of Michigan
2015-2016	Professor of Palaeobiology, Earth Sciences, University of Oxford
2014-2015	Associate Professor of Palaeobiology, Earth Sciences, University of Oxford
2009-2014	Lecturer in Palaeobiology, Earth Sciences, University of Oxford
2009-2016	Tutor in Earth Sciences, St. Hugh's College, University of Oxford

Summary of Evaluation:

Teaching: Professor Friedman's classroom instruction provides the scientific foundation of understanding evolution of life on Earth through the fossil record. Drawing heavily from the biological sciences, he teaches three courses at the undergraduate and graduate levels in paleontology, the study of ancient life, in addition to giving occasional guest lectures in course offerings by other departments. Professor Friedman receives high teaching scores while maintaining high expectations and offering rigorous coursework. As an advisor, he has contributed in meaningful ways to the professional development of a large number of graduate students. He has also influenced undergraduates through the UROP program, advised post-doctoral fellows, and hosts multiple visiting scholars, mostly at the graduate or post-doctoral level.

Research: Paleontology, the study of ancient life through the fossil record, is a key discipline in the Earth sciences, and the UM Department of Earth and Environmental Sciences has a strong, internationally recognized presence in this field. Professor Friedman's work focuses on the evolution of biological diversity, drawing heavily on information provided by the anatomical detail of ancient organisms using advanced imaging technology. The complexity of life preserved in the rock record far exceeds our direct observation of organisms alive today and thus sheds important information as to life's origins on Earth and its possible uniqueness. Professor Friedman is internationally recognized as a top specialist in the evolution of bony fish, which have a history that extends throughout a significant period of the geological record. Professor

Friedman is lauded for his dual contributions as both a collections-oriented empirical researcher, as well as provider of “big picture” theoretical efforts about the mechanism and pace of evolutionary changes. We expect Professor Friedman to continue to contribute at a high level to the innovation of recovering data from the fossil record and the application of fish anatomy to the advancement of knowledge in his field.

Recent and Significant Publications:

Rabosky, D., Chang, J., Title, P., Cowman, P., Sallan, L., Friedman, M., Kaschner, K., Garilao, C., Near, T., & Alfaro, M. (2018). An inverse latitudinal diversity gradient in speciation rate for marine fishes. *Nature*, 559(7714), 392-395.

Davesne, D., Friedman, M., Schmitt, A., Fernandez, V., Carnevale, G., Ahlberg, P., Sanchez, S., & Benson, R.B.J. (2021). Fossilized cell structures identify an ancient origin for the teleost whole-genome duplication. *Proceedings of the National Academy of Sciences*, 118(30), e2101780118.

Friedman, M., Beckett, H.T., Feilich, K.L., Alfaro, M.E., Faircloth, B.C., Černý, D., Miya, M., Near, T.J., & Harrington, R.C. (2019). A phylogenomic framework for pelagiarian fishes (Acanthomorpha: Percomorpha) highlights mosaic radiation in the open ocean. *Proceedings of the Royal Society B*, 286(1910), 20191502.

Giles, S., Xu, G.-H., Near, T., & Friedman, M. (2017). Early members of a “living fossil” lineage and the later origin of modern ray-finned fishes. *Nature*, 549(7671), 265-268.

Service: Professor Friedman’s university service is exemplary, notably through his appointment as director of UMMP in 2018. He has overseen searches for and hiring of several personnel, the transfer of faculty offices and labs to the new Biological Sciences Building, and relocation of the vast paleontological collection to the Research Museums Center. On top of all this, he led the successful effort to bring to UM the international conference of the 2024 North American Paleontological Convention (NAPC). Professor Friedman’s external service includes associate editor responsibilities for numerous highly respected journals, including four active editorships with high impact factors. He is an inaugural member of the new journal *Extinction* and an invited editor of *Proceedings of the National Academy of Sciences*. He also contributes to professional societies as a reviewer of manuscripts for thirty additional journals, as a reviewer of grant applications for NSF and numerous international granting agencies, and as a member of the nominations committee of the Paleontological Society.

External Reviewers:

Reviewer (A): “[Professor Friedman] is one of the leading paleontologists in the U.S., and one of the very best of his generation. His work has done a great deal to continue Michigan’s historic status as a major center for paleontological research and teaching. He has had an immense scholarly impact on the field of fish paleontology, seemingly able to publish prolifically and with equal authority and fluency across the entire range of time, space, and diversity for this largest of all groups of vertebrate animals.”

Reviewer (B): “Dr Friedman’s approach is interdisciplinary and his science is rigorous. He has tackled a number of major questions including the pattern of diversification of fishes over time, the relationships of ray-finned fishes and the nature of their explosive radiation following the

end-Cretaceous extinction, and the importance of jaws as a key innovation in the early radiation of vertebrates.”

Reviewer (C): “...Dr. Friedman is an excellent candidate for promotion to Full Professor. He has a well-established and funded international reputation as an excellent scientist. At the same time, he has outstanding service and teaching, making him exceptionally well rounded. I am happy to recommend this promotion without any reservation.”

Reviewer (D): “Dr. Friedman’s work is first-rate. Thorough, detailed and often novel in approach or reasoning. He has made outstanding contributions and helped shape the field. I consider him one of the outstanding paleontologists of his generation, not a trivial comment given the current intellectual vigor of the field.”

Reviewer (E): “Matt Friedman’s scientific contributions are outstanding in quantity, quality, and impact. He has published more than 100 papers in top journals, such as *Annual Reviews*, *Nature*, *Nature Ecology and Evolution*, *PNAS*, *Biology Letters*, and *Proceeding of the Royal Society*, and in the best disciplinary journals in Geology, Paleontology, and Evolution. His papers are models of excellence, highly quantitative, well-illustrated, and highly influential.”

Reviewer (F): “Professor Friedman has been called upon to write opinion pieces and reviews for many years, as well as generating a stellar list of original contribution papers. There are a handful of people I consider to be leading the field understanding the evolution of teleost fish, and Professor Friedman is central to this group, if not the key figure.”

Summary of Recommendation:

Professor Friedman has established an outstanding record of research impact and an exemplary record of student mentoring; has made strong contributions to teaching and undergraduate education; and is a highly valued colleague in the Department of Earth and Environmental Sciences and his broader scientific community for his service contributions. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor Matt Friedman be promoted to the rank of professor of Earth and environmental sciences, with tenure, College of Literature, Science, and the Arts.



Anne Curzan, Dean
Geneva Smitherman Collegiate Professor of
English Language and Literature, Linguistics,
and Education
Arthur F. Thurnau Professor
College of Literature, Science, and the Arts

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