



WILLIAM TIMOTHY TREAL TAYLOR

Archaeozoology Laboratory, CU Museum of Natural History
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PROFESSIONAL PREPARATION

- University of New Mexico, Ph.D. Anthropology *with Distinction*, May 2017
- “The Origins of Horse Herding and Riding in the Eastern Steppe”
- University of New Mexico, M.S. Anthropology, May 2013
- “High Latitudes, High Stakes: Arctic Conservatism, Biogeography, and the ‘Collapse’ of Norse Settlement in Greenland During the Little Ice Age”
- Carleton College, B.A. International Relations *Magna cum Laude*, 2011

PROFESSIONAL EXPERIENCE

- 2019-present Assistant Professor and Curator of Archaeology, CU Boulder Department of Anthropology/CU Museum of Natural History
- 2019-present Research Affiliate, Max Planck Institute for the Science of Human History
- 2017-2019 Postdoctoral Research Fellow, Max Planck Institute for the Science of Human History
- 2018-2019 Research Associate, Biodiversity Institute, University of Kansas
- 2017-2020 Adjunct Assistant Professor of Anthropology, University of New Mexico

FUNDING

Active

- 2024 – Franklin Research Award, American Philosophical Society
- 2023-present. University of Colorado Research and Innovation Seed Grants, “Understanding human-animal dynamics and early prehistory in the Inner Asian Altai - investigations at Khoid Tsenkher Cave.”, \$50,000
- 2023-present. National Science Foundation, “Understanding long term human adaptation in a challenging environment.”, \$34,000
- 2023-present. University of Colorado Outreach and Engagement, “Early-childhood science education resources for the Front Range deaf community and beyond.” \$22,000
- 2022-present. Colorado State Historical Fund, “Preserving the Paleoindian Past: Conservation of the Olsen-Chubbuck Bison Skulls.” \$38,356
- 2020-present. National Science Foundation, Senior Research Fellowship (Archaeology). “Horses and Human Societies in the American West” \$300,000

Prior

2021. University of Colorado Research and Innovation Seed Grants, “Exploring Pastoral Prehistory and Climate Dynamics in the Mongolian Altai Through Glacial Archaeology.”, \$50,000

2021. Council of American Overseas Research Centers (CAORC) Multi-Country Research Fellowship, “Understanding pastoral prehistory in Inner Asia’s mountain zones through glacial archaeology.”, \$12,500.
2021. Franklin Research Grant, American Philosophical Society. “Frozen Heritage and Pastoral Prehistory in Mongolia’s Altai Mountains.” \$6000.00
2022. Center for Arts and Humanities Small Grants, University of Colorado, \$1000
2022. Arts and Sciences Fund for Excellence, University of Colorado, \$1000
2020. University of Colorado Center for Arts and Humanities, “Horses and Human Societies in New World Argentina.” \$2000.00
2019. HKW/”Mississippi:An Anthropocene River” Initiative. “Horses, Donkeys, and the Anthropocene in the Greater Mississippi.” EUR 7,000.00
2018. DAAD Joint Australia-Germany Research Cooperation Scheme, “Horses and Human Societies in New World Australia” EUR 20,000.00
- 2016 Ambassador’s Grant, U.S. Embassy in Mongolia – “Tracing the Origins of Mongolia’s Early Horse Culture” \$5,000.00
- 2015-16 Fulbright U.S. Student Research Award (#34154234), Mongolia, “Exploring Ancient Horse Use in the Mongolian Steppe”
- 2015 National Geographic Young Explorer’s Grant (#9713-15), “Bronze Age Riders? Evaluating Evidence for Horse Herding and Transport in Ancient Mongolia”
- 2015 National Science Foundation Doctoral Dissertation Improvement Grant (#1522024), “Domestic Horse Use in Ecological and Historical Context” \$20,000.00

SELECTED PUBLICATIONS

Taylor, WTT.

2024 (in press). *Hoof Beats: How Horses Shaped Human History*. University of California Press.

Bayarsaikhan, Jamsranjav, Tsagaan Turbat... and **WTT Taylor (corresponding)**.

2024. The origins of saddles and riding technology in East Asia: discoveries from the Mongolian Altai. *Antiquity*. 98(397):102-118. doi:10.15184/aqy.2023.172

Taylor, WTT, Juan Bautista Belardi et al.

2023. Interdisciplinary evidence for early domestic horse exploitation in southern Patagonia. *Science Advances* 9,eadk5201. DOI:10.1126/sciadv.adk5201

Taylor, WTT, Pablo Librado, Joseph American Horse, Carlton Shield Chief Gover, Jimmy Arterberry, et al.

2023. Early Dispersal of Domestic Horses into the Great Plains and Northern Rockies. *Science* 379(6639):1316-1323. <https://www.science.org/doi/10.1126/science.adc9691>

Ankhsanaa, Ganbold, Enkhbayar Mijiddorj, Byambasuren Davaatseren, and **WTT Taylor** (corresponding author).

2023. Rock Art and Early Cultural Dynamics in Eastern Mongolia. *Asian Perspectives* 62(1), published ahead of print December 2022. <https://doi.org/10.1353/asi.2022.0033>

Pettigrew DB, **Taylor WTT**

2023. Reassessing the terminal ballistic performance of trilobate and quadrilobate arrow points on Iron Age battlefields. *PLoS ONE* 18(7): e0288483. <https://doi.org/10.1371/journal.pone.0288483>

Zhang, C., Y. Wang, J. Zhang, **WTT Taylor**, F. Sun, Z. Huang, R. Qiu, F. Hou, R. Flad, and Y. Li.

2023. Elite chariots and early horse transport at the Bronze Age burial site of Shijia. *Antiquity*, published ahead of print April 2023. <https://doi.org/10.15184/aqy.2023.54>

Taylor, WTTT.

2023 (In Press). Morphological and Functional Analysis of Unifacially Modified Stone Tools from Shuka Kaa Cave. Chapter 11. *Final Report of the Archeological Excavations at Shuka Kaa*

- Cave, Alaska*. Aurora Monograph Series, Alaska Anthropological Association. Anchorage, AK.
- Struck, J., Bliedtner, M., Strobel, P., **WTT Taylor**, et al. (corresponding author) 2022. Central Mongolian lake sediments reveal new insights on climate change and equestrian empires in the Eastern Steppes. *Sci Rep* 12, 2829 <https://doi.org/10.1038/s41598-022-06659-w>
- Taylor, WTT**, Juan Wang, Juan, Jinping Cao, Yue Li, Chengrui Zhang, Helena Miton, Igor Chechushkov, et al. 2021. Understanding early horse transport in eastern Eurasia through damage to the equine dentition. *Antiquity*, published ahead of print September 2021 (<https://doi.org/10.15184/aqy.2021.146>)
- Taylor, WTT**, Isaac Hart, Caleb Pan, Jamsranjav Bayarsaikhan, James Murdoch...Muhammad Zahir, et al. 2021. High altitude hunting, climate change, and pastoral resilience in eastern Eurasia. *Nature: Scientific Reports* 11:14287 (<https://doi.org/10.1038/s41598-021-93765-w>)
- Taylor, WTT** and Christina Barron-Ortiz. 2021. Rethinking the evidence for early horse domestication at Botai. *Nature: Scientific Reports* 11(7440).
- Taylor, WTT**, et al. 2021. Evidence for Early Dispersal of Domestic Sheep into Central Asia: genetic, archaeozoological, and biomolecular insights from Obishir V. *Nature: Human Behavior*, published ahead of print 8 April 2021 (<https://www.nature.com/articles/s41562-021-01083-y>)
- Taylor, WTT**, et al. 2021. Interdisciplinary Analysis of the Lehi Horse: Implications for Early Historic Horse Cultures of the North American West. *American Antiquity*, published ahead of print 4 Feb 2021 (<https://doi.org/10.1017/aaq.2020.109>)
- Taylor, WTT**. 2021. Building a scientific model for East Asian pastoral origins: A reply to Honeychurch et al. *Archaeological Research in Asia* 26(100286).
- Taylor, WTT**, E. James Dixon, Albert Hafner, and Martin Hinz. 2021. New Directions in a Warming World. *Journal of Glacial Archaeology* 5:1-3, <https://doi.org/10.1558/jga.20547>
- Clark, Julia, Jamsranjav Bayarsaikhan, Alicia Ventresca Miller, Sandra Vanderwarf, Isaac Hart, Gino Caspari, and **WTT Taylor**. 2021. Mongolia's Frozen Heritage: A Summary of the Archaeology of the Cultural Cryosphere. *Journal of Glacial Archaeology* 5:103-120 <https://doi.org/10.1558/jga.19784>
- Spengler, Robert, Alicia Ventresca Miller, Tekla Schmaus, Giedrė Motuzaitė Matuzevičiūtė, Bryan K. Miller, Shevan Wilkin, **WTT Taylor**, Yuqi Li, Patrick Roberts, and Nicole Boivin. 2021. An Imagined Past? Nomadic Narratives in Central Asian Archaeology. *Current Anthropology*, published ahead of print 12 May 2021 <https://www.journals.uchicago.edu/doi/10.1086/714245>
- Hanot, Pauline, Jamsranjav Bayarsaikhan, Claude Guintard, Ashleigh Haruda, Enkhbayar Mijiddorj, Renate Schafberg, and **WTT Taylor**. 2021. Cranial Shape Diversification in Horses: Variation and Covariation Patterns under the Impact of Artificial Selection. *BMC Ecology and Evolution* 21 (1): 178.
- Wilkin, Shevan, Alicia Ventresca Miller, Ricardo Fernandes, Robert Spengler, **WTT Taylor**, Dorcas R. Brown, David Reich, et al. 2021. Dairying Enabled Early Bronze Age Yamnaya Steppe Expansions. *Nature* 598 (7882): 629–33.

- Librado, Pablo, Naveed Khan, Antoine Fages, Mariya A. Kusliy, Tomasz Suchan, Laure Tonasso-Calvière, Stéphanie Schiavinato... **WTT Taylor**... and others.
2021. The Origins and Spread of Domestic Horses from the Western Eurasian Steppes. *Nature* 598 (7882): 634–40.
- Vanwezer, Nils, S. Breitenbach, F. Gazquez, J. Louys, A. Kononov, D. Sokol'nikov, E. Avirmed... **WTT Taylor** et al.
2021. Archaeological and environmental cave records in the Gobi-Altai Mountains, Mongolia. *Quaternary International*, <https://doi.org/10.1016/j.quaint.2021.03.010>
- Vanwezer, N., **WTT Taylor**, J. Bayarsaikhan, S. Breitenbach, N. Amano, J. Louys, M. del Val, N. Boivin, M. Petraglia.
2021. Hunting, herding, and people in the rock art of Mongolia: New discoveries in the Gobi-Altai Mountains. *Archaeological Research in Asia* 26:100627.
- Rawson, Jessica, Limin Huan, and **WTT Taylor**.
2021. Seeking Horses: Allies, Clients and Exchanges in the Zhou Period (1045–221 BC). *Journal of World Prehistory* 34:489–530 <https://doi.org/10.1007/s10963-021-09161-9>
- Taylor, WTT**, Fantoni, M., Marchina, C., Lepetz, S., Bayarsaikhan, J., Houle, J.-L., Pham, V., Fitzhugh, W.,
2020. Horse sacrifice and butchery in Bronze Age Mongolia. *J. Archaeolog. Sci.: Rep.* 31, 102313. <https://doi.org/10.1016/j.jasrep.2020.102313>.
- Taylor, WTT**, Wang, J., Hart, I.
2020. Understanding the prehistory of domestic animals in East and Central Asia through scientific archaeozoology. *J. Archaeolog. Sci.: Rep.* 32, 102397. <https://doi.org/10.1016/j.jasrep.2020.102397>
- Taylor, WTT**, et al.
2020. Early Pastoral Economies and Herding Transitions in Eastern Eurasia. *Nature:Scientific Reports* 10:1001. <https://doi.org/10.1038/s41598-020-57735-y>
- Jeong, Choongwon, Ke Wang, Shevan Wilkin, **WTT Taylor**, et al.
2020. A dynamic 6,000-year genetic history of Eurasia's Eastern Steppe. *Cell*, published ahead of print 5 November 2020. <https://doi.org/10.1016/j.cell.2020.10.015>
- Shnaider, S.V., K. Kolobova, T. Filiminova, **W. Taylor**, A Krivoschapkin.
2020. New insights into the Epipaleolithic of western Central Asia: The Tutkaulian complex. *Quaternary International* 535: 139-154
- Li, Yue, Chengrui Zhang, **WTT Taylor**, et al.
2020. Early evidence for mounted horseback riding in northwest China. *Proceedings of the National Academy of Sciences*. Published ahead of print 3 November 2020. www.pnas.org/cgi/doi/10.1073/pnas.2004360117
- Wilkin, S., Ventresca Miller, A., Miller, B.K. Spengler III, Robert, **Taylor, WTTT**, et al.
2020. Economic Diversification Supported the Growth of Mongolia's Nomadic Empires. *Sci Rep* 10, 3916 (2020). <https://doi.org/10.1038/s41598-020-60194-0>
- Wilkin, S., Ventresca Miller, A., **Taylor, W.T.T. et al.**
2020. Dairy pastoralism sustained eastern Eurasian steppe populations for 5,000 years. *Nat Ecol Evol* 4, 346–355 (2020). <https://doi.org/10.1038/s41559-020-1120-y>
- Taylor, WTTT**, et al.
2019. Investigating Reindeer Pastoralism and Exploitation of High Mountain Zones in Northern Mongolia through Ice Patch Archaeology, *PLoS One* 14(11): e0224741. <https://doi.org/10.1371/journal.pone.0224741>
- Taylor, WTTT**, et al.

2019. Radiocarbon dating and cultural dynamics across Mongolia's early pastoral transition. *PLoS One* 14(11): e0224241. <https://doi.org/10.1371/journal.pone.0224241>
- Taylor, William**, et al.
2019. Investigating ancient animal economies and exchange in Kyrgyzstan's Alay Valley. *Antiquity (Project Gallery)* 93(367). <https://doi.org/10.15184/aqy.2019.4>
- Fages A, K. Kristian Hanghoj, C. Gaunitz, Naveed Khan, C. Gamba, A. Seguin-Orlando ... **Taylor WTT**... and others.
2019. Tracking five millennia of horse management with extensive ancient genome time-series. *Cell* 176(6):1419-1435.
- Jeong, Choongwon, and Shevan Wilkin, Judith Littleton, Richard Hagan, Tsend Amgalantugs, Cheryl Makarewicz, **WTT Taylor**, et al.
2018. Population migration and dairy pastoralism in the Mongolian Steppe. *Proceedings of the National Academy of Sciences* 115 (48) E11248-E11255 (2018).
- Taylor, WTT** et al.
2018. Early Pastoral Economies along the Ancient Silk Road: Biomolecular evidence from the Alay Valley, Kyrgyzstan. *PLoS ONE* 13(10):e0205646.
- Taylor, WTT**, et al.
2018. Origins of Equine Dentistry. *Proceedings of the National Academy of Sciences*, 115 (29) E6707-E6715 (2018) DOI:10.1073/pnas.1721189115
- Shnaider S.V., Abdykanova A., **Taylor W.**, Kolobova K.A., Krivoschapkin A.I.
2018. Early human occupation of high altitude in western Central Asia: new evidence from the Alay valley, Kyrgyzstan. *Antiquity* Vol 92 (June 2018).
- Taylor, WTT**, et al.
2017. A Bayesian Chronology for Early Domestic Horse Use in the Eastern Steppe. *Journal of Archaeological Science* 81:49-58
- Taylor, WTT**.
2017. Horse demography and use in Bronze Age Mongolia, *Quaternary International* 436:270-282.
- Taylor, WTT**, Tuvshinjargal Tumurbaatar, and Bayarsaikhan Jamsranjav.
2016. Reconstructing Equine Bridles in the Mongolian Bronze Age. *Journal of Ethnobiology* 36(3):554-570
- Taylor, WTT**, Bayarsaikhan Jamsranjav, and Tuvshinjargal Tumuurbaatar.
2015. Equine Cranial Morphology and the Archaeological Identification of Riding and Chariotry: Applications to Mongolia's late Bronze Age. *Antiquity* 89(346): 854-871.

MONOGRAPH CHAPTERS

- Taylor, WTT** and Tumurbaatar Tuvshinjargal.
2018. Horseback riding, asymmetry, and anthropogenic changes to the equine skull: evidence for mounted riding in Mongolia's late Bronze Age. In Bartosiewicz and Gal (eds.), *Care or Neglect? Evidence of Animal Disease in Archaeology*. Oxford, Oxbow Books.

REVIEWS

- Taylor, WTT**.
2022. Building data-driven models for horse domestication and transport. *Current Anthropology* 63(3)
- Taylor, WTT**

2019. Review: The Donkey in Human History: An Archaeological Perspective. Peter Mitchell. Oxford: Oxford University Press, 2018, 306 pp. £65.00, paper. ISBN 9780198749233. *Journal of Anthropological Research* (forthcoming).

Taylor WTT

2017. Review: The Diffusion of a Postal Relay System in Premodern Eurasia. Didier Gazagnadou. Paris: Editions Kimé, 2016, 188 pp. €20.00, paper. ISBN 9782841747771. *Journal of Anthropological Research* 74(2):278-279

NON-REFEREED

Taylor, William, and Jamsranjav Bayarsaikhan.

2024. Ancient saddle and stirrup discoveries highlight the impact of Mongolian steppe cultures in innovation of riding technology. *Cambridge*. 23 January 2024.

<https://www.cambridge.org/core/blog/2024/01/23/ancient-saddle-and-stirrup-discoveries-highlight-the-impact-of-mongolian-steppe-cultures-in-innovation-of-riding-technology/>

Taylor, William and Yvette Running Horse Collin.

2023. Archaeology and genomics together with Indigenous knowledge revise the human-horse story in the American West. *The Conversation*. 30 March 2023.

<https://theconversation.com/archaeology-and-genomics-together-with-indigenous-knowledge-revise-the-human-horse-story-in-the-american-west-202222>

Taylor, William.

2021. Melting Mongolian ice reveals fragile artifacts that provide clues about how past people lived. *The Conversation*. 11 August 2021. <https://theconversation.com/melting-mongolian-ice-reveals-fragile-artifacts-that-provide-clues-about-how-past-people-lived-164657>

Taylor, William.

2020. Pandemics and the Post: Mongolia's Pony Express. *The Diplomat*. 16 October 2020.

<https://thediplomat.com/2020/10/pandemics-and-the-post-mongolias-pony-express/>

Taylor, William.

2020. Humans domesticated horses – new tech could help archaeologists figure out where and why. *The Conversation*. 2 March 2020. <https://theconversation.com/humans-domesticated-horses-new-tech-could-help-archaeologists-figure-out-where-and-when-131831>

Taylor, William.

2019. How Dan the Zebra Stopped An Ill Fated Government Breeding Program In Its Tracks. *Smithsonian Magazine*. 4 December 2019.

<https://www.smithsonianmag.com/smithsonian-institution/how-dan-zebra-stopped-ill-fated-government-breeding-program-tracks-180973542/>

Taylor, William.

2018. Exploring the Origins of Horse Herding and Riding in the Mongolian Steppe. *The Silk Road* 15:153-155.

Taylor, William.

2018. How Ancient Exchanges in Central Asia Shaped the Modern World. *The Diplomat*. 11 Apr 2018. <https://thediplomat.com/2018/04/how-ancient-exchanges-in-central-asia-shaped-the-modern-world/>

Taylor, William.

2017. Beyond Genghis Khan: how looting threatens to erase Mongolia's history. *The Guardian*, Science Notes & Theories. 26 October 2017.

<https://www.theguardian.com/science/blog/2017/oct/26/beyond-ghengis-khan-how-looting-threatens-to-erase-mongolias-history>

Taylor, William.

2016. Archaeology sheds light on Mongolia's uncertain nomadic future. *The Guardian*, Science Notes & Theories. 7 December 2016.

<https://www.theguardian.com/science/blog/2016/dec/07/archaeology-sheds-light-on-mongolias-uncertain-nomadic-future>

PRIZES AND AWARDS

2024. Newcomb Cleveland Prize, American Association for the Advancement of Science (\$25,000).
2022 Research and Innovation Office Faculty Fellow, University of Colorado-Boulder
2021 Mary Ellen Lane Multi-Country Research Award, Council of American Overseas Research Centers
2019 Tom L. Popejoy Doctoral Dissertation Research Prize, University of New Mexico
2016-2017 Ruth Kennedy Dissertation Prize, University of New Mexico
2014 International Council for Archaeozoology Open Zooarchaeology Prize
2014 International Council for Archaeozoology Stine Rossel Dissertation Prize
2014 Society for Archaeological Sciences R.E. Taylor Student Poster Award
2013 Patrick Orion Mullen Award in Archaeological Science, University of Wyoming Frison Institute
2011 NCAA Postgraduate Research Fellowship
2011 Phi Beta Kappa, Minnesota Beta Chapter, Carleton College
2011 Warren L. Beson Memorial Award (for academic excellence in athletics), Carleton College
2010 ESPN/CoSida Academic All-America Award, 2nd Team
2007 United States National Merit Scholar
2007 United States Presidential Scholar

CERTIFICATIONS

2020. National Geographic Certified Educator
2017. ArcGIS: Introduction to GIS 10.4, ESRI Deutschland
2015. A Comprehensive Guide to Bayesian Analysis of Radiocarbon Dates Using OxCal, University of Arizona Accelerator Mass Spectrometry Lab, Time Series: Seminars on Dating and Chronology, Tucson, Arizona.
2014. 4th Transmitting Science Workshop in 3D Geometric Morphometrics, Barcelona, Spain.

LANGUAGES

Advanced proficiency, Mongolian
Intermediate proficiency, Spanish
Beginner proficiency, Mandarin Chinese

SERVICE

Editorships

Editor, *Journal of Glacial Archaeology* (2020-present)

Associate Editor, *Frontiers in Ecology and Evolution* (2023-present)

University service

Arts & Sciences Council (Faculty Senate) representative, Anthropology (2020-present)
Justice, Equity, Diversity, and Inclusion Committee, CU Museum (2022-present), co-chair (2023-present)
Space Committee, Department of Anthropology (2022-present)
Advisory Board, Center for Collaborative Synthesis in Archaeology (2021-present)
Instructor, Zooarchaeology and Field Ecology (ZOFE) Summer Field School, University of Utah (2021-present)

Editorial Board

Executive Board, American Center for Mongolian Studies
Editorial Board, *Cheiron*

Professional Memberships

Member, International Council for Archaeozoology (ICAZ)
Member, Society for American Archaeology (SAA)
Member, Montana Archaeological Society (MAS)