# CURRICULUM VITAE

Kirsten Meltesen | she/her
kmelt@uw.edu

## EDUCATION

2021- Ph.D. Student, Biology, University of Washington – Seattle
Cumulative GPA: 3.95

2017-21 B.S. Ecology, Evolution, and Behavior, University of Minnesota – Twin Cities
Minors | Anthropology, Earth Sciences
Cumulative GPA: 3.95 | Dean's List, 7 semesters

## HONORS & AWARDS

2023 Honorable Mention, NSF Graduate Research Fellowship Program
2023 Margo & Tom Wycoff Award, Department of Biology, University of Washington ($3200)
2023 Richard C. Snyder Award, Department of Biology, University of Washington ($1500)
2022 Jackson School of Geosciences Student Travel Grant, Society of Vertebrate Paleontology ($400)
2021-23 ARCS Foundation Scholar, ARCS Foundation - Seattle Chapter ($17500)
2020 Nominee, Neil C. Tappen prize in Biological Anthropology, University of Minnesota
2020 Undergraduate Research Opportunity Program, University of Minnesota ($1500)
2020 Nominee, Goldwater Scholarship, University of Minnesota
2019 Norman Kerr Memorial Scholarship, University of Minnesota ($1000)
2019 2nd Place Poster, Natural Resources Symposium, University of Minnesota
2018 Study Abroad Scholarship, University of Minnesota ($1500)
2017-21 National Scholarship, University of Minnesota ($40000)
2017 Rotary Scholarship, St. Charles Rotary Club, IL ($1000)

## RESEARCH PROJECTS & FIELDWORK EXPERIENCE

2021- **Mid-Paleocene Mammalian Community Ecology, Southeastern MT**

- Leads active field research for collection of mammalian microfossils via surface collection, and bulk sediment collection and screen washing at Medicine Rocks I, the Mehling Site, 7-Up Butte, and the Olive Locality.
- Identifies and describes fossil mammal specimens
- Mentors undergraduate research assistants

2021- **Lane's Little Jaw Quarry, MT**

- Identified and described cranial fragment of *Mimatuta minuial*. Manuscript in prep.

2020 **Spatial variation in mammalian feeding category richness in North America**
Advised by: Dr. Kieran McNulty

- Characterized the relationship between feeding category and latitude for the four most speciose North American mammalian orders using correspondence analysis in R and visualized spatial patterns in QGIS for ANTH 5403: Quantitative Methods in Biological Anthropology independent term project
- Final paper nominated for Neil C. Tappen prize in Biological Anthropology which recognizes the best undergraduate papers submitted for a class or capstone project

2020- **Evidence for Niche Conservatism in *Perognathus* (Rodentia: Heteromyidae)**
Advised by: Dr. David L. Fox and Evan T. Whiting, M.Sc.

- Characterized and visualized the fundamental niches of rodents in the genus *Perognathus* from the Last Glacial Maximum (ca. 21 ka) to present using MaxEnt and QGIS in order to determine the level of niche overlap between related species and evaluate whether modern populations exhibit niche conservatism

2020 **Dinosaurs of Cretaceous Utah, Fieldwork**
Advised by: Dr. Peter Makovicky

- Prospected for fossils in the Cedar Mountain Formation of Utah (San Rafael Swell and Dinosaur National Monument) and excavated a fossil quarry, learning proper methods for uncovering, jacketing, and removal of bones

2019- **Deconstructing the latitudinal diversity gradient of North American mammals by nominal order**
Advised by: Dr. David L. Fox and Dr. Evan T. Whiting.

- Investigated the degree to which Rodentia and Chiroptera, the two most speciose clades of North American mammals, control the latitudinal diversity gradient for North American mammals as a whole and how climate drives these species richness patterns through spatial regression
- Manuscript in review at the Journal of Mammalogy with myself as first author

2019 **Elevational Gradients and Phylogenetic Community Structure in North American Rodent Assemblages**
Advised by: Dr. Jeannine Cavender-Bares and Dr. Jesús N. Pinto-Ledezma

- Devised, proposed, and executed a biogeographic assessment of North American rodent phylogenetic diversity to determine the impact of elevational gradients on the spatial distribution of phylogenetic community structures for EEB 3534: Biodiversity Science independent term project
- Calculated phylogenetic biodiversity metrics including Faith's PD, Nearest Taxon Index, and Net Relatedness Index in R and visualized data in QGIS
- Wrote academic research paper and gave oral presentation

2018 **Cranial Morphology of Minnesota Wolves**
Advised by: Samantha Porter, M.A., Dr. David L. Fox, and Dr. Kieran McNulty

- Spent 30+ hours scanning wolf crania and mandibles using structured light imaging technology (*Creaform Go!Scan* 20)
- Processed scan data into 3D digital files for use in landmarking using VXModel and MeshLab

2018 **Paleoanthropology and Paleontology of Rusinga Island, Kenya (Field School)**
Advised by: Dr. Kieran McNulty and Dr. Lauren Michel

- Observed and recorded animal behavior to assess modern mammalian community structure at Ol Pejeta Conservancy
- Measured stratigraphic sections and described paleosols
- Trained in survey, field identification, and excavation of fossils

## PUBLICATIONS

**Meltesen, K.M.**, Whiting, E.T., Pinto-Ledezma, J.N., Cicak, T., and Fox, D.L. (Accepted) Deconstructing the latitudinal diversity gradient of North American mammals by nominal order. *Journal of Mammalogy*.

## CONFERENCE ABSTRACTS

**Meltesen, K.M.,** So, T.Y., Youzwyshyn, G.P., and Wilson Mantilla, G.P. (2022) *Insights from an understudied mammal site from the mid-Paleocene (Torrejonian) of southeastern Montana*. Oral presentation at the 82nd Annual Meeting of the Society of Vertebrate Paleontology, Toronto, Canada.

**Meltesen, K.M.**, Whiting, E.T., and Fox, D.L. (2020) *The latitudinal diversity gradient of modern North American mammals masks multiple ordinal level patterns: implications for the origin of the mammalian diversity gradient in the late Cenozoic fossil record*. Oral presentation at the 80th Annual Meeting of the Society of Vertebrate Paleontology, Virtual.

**Meltesen, K.M**., Whiting, E.T., and Fox, D.L. (2019) *Rodents as Drivers of Biogeographic Patterns of Mammalian Species Richness in North America*. Poster session presented at the Natural Resources Symposium, University of Minnesota, Minneapolis, MN.

**Meltesen, K.M**., Whiting, E.T., and Fox, D.L. (2019) *Rodents as Drivers of Biogeographic Patterns of Mammalian Species Richness in North America*. Poster session presented at the 5th Annual Earth and Environmental Sciences Student Research Symposium, University of Minnesota, Minneapolis, MN.

## RESEARCH TALKS

2022 10th Annual Dino Shindig, Carter County Museum, Ekalaka, MT (*Mammals of the Medicine Rocks*)

2021 Graduate Student Seminar, University of Washington, Seattle, WA (*The latitudinal diversity gradient of modern North American mammals masks multiple ordinal level patterns*)

## SCIENCE EDUCATION & OUTREACH EXPERIENCE

2022- **Instructor,** DIG Field School, Burke Museum of Natural History and Culture, WA

- Engages K-12 STEM teachers with active field research in the Hell Creek area of northeastern Montana by teaching paleontological field methods (e.g., microfossil collection) during a four day summer program

2022 **Volunteer**, Dino Fest, Burke Museum of Natural History and Culture, WA
- Engaged Burke Museum visitors with fossil material from the Burke Museum collections and answered questions about paleontology

2020 **Volunteer**, ESCI Department Outreach Team, University of Minnesota, MN
- Designed a hands-on activity cart about rock and mineral identification in collaboration with team members for use by the Bell Museum for science education purposes

2018-21 **Museum Interpretive Guide** (**Tier II)**, Bell Museum of Natural History, St. Paul MN
- Understands and uses science-based inquiry learning techniques with visitors
- Acts as Lead on Duty to coordinate and manage museum student staff
- Engages visitors in the Touch and See Lab with changing educational content
- Provides feedback and assists in review and revision of museum programming
- Provides animal care in the Touch and See Lab
- Co-facilitates laboratory experiences for K-12 students
- Mentors Interpretive Guide Tier I staff in a variety of museum responsibilities
- Leads exhibit tours for K-12 students and public groups

2018-19 **Volunteer**, Lily Lake Grade School, Lily Lake IL
- Invited as guest speaker for "Dinosaur Day" and participated in Q&A session about paleontological research with Lily Lake third graders
- Facilitated Science Olympiad activities with grades K-5

2017 **Volunteer Docent**, Gail Borden Public Library, Elgin IL
- Engaged library patrons through guided tours of paleontologist Dr. Paul Sereno's traveling exhibit, "Dinosaur Giants"

2015-17 **Volunteer Science Educator**, Elgin Public Museum, Elgin IL
- Demonstrated and explained themed scientific experiments for K-12 students and their families at monthly "Science Nights"
- Coordinated high school volunteers

## RESEARCH SKILLS & SOFTWARE EXPERIENCE

- R programming
- QGIS
- Excel
- MaxEnt
- Structured light imaging (*Creaform Go!Scan 20*)
- Petrographic microscopy
- Specimen imaging: Nikon camera, iCapture software, Zerene image stacker

## PROFESSIONAL SOCIETY MEMBERSHIPS

American Society of Mammalogists
Society of Vertebrate Paleontology

## TEACHING & MENTORSHIP EXPERIENCE

2022 **Teaching for Equity**, taught by Dr. Elli Theobald about equitable STEM teaching strategies

2021-23 **Graduate Teaching Assistant**, BIOL 180 Introductory Biology (3 quarters), University of Washington, WA

2022 **Graduate Teaching Assistant,** BIOL 452 Vertebrate Biology (1 quarter), University of Washington, WA

2021 **Teaching Assistant**, ESCI 1003: Dinosaurs and Our World, University of Minnesota, MN

- Facilitated lab activities for two sections of undergraduate students regarding dinosaur evolution, ecology, and extinction, grades lab assignments, and provides support for students outside the classroom via email and office hours

2020-21 **Teaching Assistant**, BIOL 2005: Animal Diversity Lab, University of Minnesota, MN

- Designed lectures and leads dissections for two sections of undergraduate students regarding the anatomy and evolutionary history of major animal clades, writes and grades quizzes and exams, and provides support for students outside the classroom via review sessions and office hours

2020 **Subject Tutor**, Lindahl Academic Center, University of Minnesota, MN

- Tutored student-athletes weekly in introductory Earth sciences coursework, explaining course material in a personalized, easy to understand manner

2019-21 **Upper Level Mentor**, CAPE Major Network, University of Minnesota, MN

- Communicated with and provides resources for underclassmen interested in a degree in Ecology, Evolution, and Behavior and answers questions regarding the curriculum and my undergraduate experience in the program

## CAMPUS INVOLVEMENT

2022- **Member**, Solidarity and Mobilization Workgroup, UAW 4121, University of Washington, WA

- Reproductive Justice subgroup – mobilizes UAW members to attend actions (marches/rallies/etc) calling for expanding and protecting access to abortion, among other reproductive justice efforts, and supports organizing efforts to make medication abortion available to the UW student population at Hall Health
- Trained in clinic defense through Puget Sound Mobilization for Reproductive Justice

2017-21 **President**, Scientific Research Communication, University of Minnesota, MN

- Organized biweekly seminars featuring cutting-edge research from University of Minnesota faculty across multiple colleges and departments
- Planned and organized science communication workshops and informational panels on topics relevant to the logistics of pursuing a career in research
- Coordinated administrative tasks with sensitive deadlines such as reservation of meeting spaces and group registration
- Collaborated with group officers to plan group events, meetings, and fundraisers, and delegates tasks accordingly
- Wrote grant applications to fund group activities, earning upwards of $775

2018-19 **Admissions Ambassador**, Admissions Ambassadors, University of Minnesota, MN

- Led biweekly one-and-a-half-hour campus tours to prospective students
- Participated in fundraising activities including Minnesota Dance Marathon and Relay for Life

2017-18 **Member**, Ecology Club, University of Minnesota, MN

- Attended guest lectures by researchers studying topics in ecology and toured university labs and research collections

2017 **Member**, Quiz Bowl, University of Minnesota, MN

- Participated in weekly practices answering fast paced collegiate trivia questions
- Competed in Quiz Bowl tournaments