Christopher M. Schiller **CURRICULUM VITAE**

Visiting Assistant Professor
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Research Associate
University of Washington, Burke Museum
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EDUCATION

Nov. 2020 **Ph.D. in Earth Sciences**
Montana State University – Bozeman, Montana, USA
Dissertation: "Hydrothermal influences on the Holocene environmental history of central Yellowstone National Park"
Committee: Cathy Whitlock (Chair), David B. McWethy, Lisa A. Morgan, Devon Orme

May 2015 **B.S. in Geology, *magna cum laude***
South Dakota School of Mines and Technology – Rapid City, South Dakota, USA
Thesis: "Historical occurrence of *Didymosphenia geminata* in Grand Teton NP"
Advisor: Lisa A. Kunza

RESEARCH INTERESTS

Paleobotany and paleoenvironments on Cenozoic to Quaternary timescales; Disturbance ecology of ancient ecosystems; Vegetation response to ancient climate change.

RESEARCH EMPLOYMENT

2023-present Postdoctoral Researcher (Dept. of Earth Sciences, Montana State U.)
Geochemistry, limnogeology, paleovegetation of Yellowstone National Park's thermal basins (PI Cathy Whitlock).

2021-2023 NSF-EAR Postdoctoral Fellow (Dept. of Biology/Burke Museum, U. of Washington)
Paleovegetation change during the Miocene Climatic Optimum in the Pacific Northwest (PI Caroline Strömberg).

Spring 2021 Postdoctoral Researcher (Dept. of Earth Sciences, Montana State U.)
Pollen and limnogeology sample curation and data stewardship (PI Cathy Whitlock).

2016-2020 Doctoral Researcher (Dept. of Earth Sciences, Montana State U.)
Hydrothermal and volcanic influences on Holocene vegetation of Yellowstone National Park and surrounding region (PI Cathy Whitlock).

July 2015 Field Assistant (Program of Atmospheric Science, South Dakota School of Mines and Technology)
Distribution and history of nuisance algae in Grand Teton National Park (PI Lisa Kunza).

2014-2015 Research Assistant (Dept. of Geology and Geological Engineering, South Dakota School of Mines and Technology)
Pleistocene foraminifera preparation (PI Christina Belanger).

PUBLICATIONS

Schiller, C.M., Lowe, A.J., Dillhoff, T.A., Fields, P.F., Taggart, R.E., Schmitz, M.D., Strömberg, C.A.E., *in review*, Mechanisms of short-term plant community change from the Miocene Succor Creek flora, Oregon and Idaho (USA).

Schiller, C.M., Alt, M., Nanavati, W.P., Wendt, J.A.F., Stahle, L.N., 2023, Getting Information from the Past: Palaeoecological Studies of Terrestrial Ecosystems, *in* Clifford, N., Cope, M., Gillespie, T., eds., Key Methods in Geography, 4th ed, ISBN: 9781529772081.

Morgan, L.A., Shanks, W.C.P., Pierce, K.L., Iverson, N.A., **Schiller, C.M.,** Brown, S.R., Zahajská, P., Cartier, R., Cash, R., Whitlock, C., Fritz, S.C., Best, J., Lovalvo, D.A., Lowers, H., Benzel, W., 2022, The dynamic floor of Yellowstone Lake, Wyoming, USA: The last 14 k.y. of hydrothermal explosions, venting, doming, and faulting: GSA Bulletin, doi: 10.1130/B36190.1.

Schiller, C.M., Whitlock, C., Brown, S.R., 2022, Holocene geo-ecological evolution of Lower Geyser Basin, Yellowstone National Park (USA): Quaternary Research, v. 105, p. 201-217, doi:10.1017/qua.2021.42.

Brown, S.R., Cartier, R., **Schiller, C.M.,** Zahajská, P., Fritz, S.C., Morgan, L.A., Whitlock, C., Conley, D.J., Lacey, J.H., Leng, M.J., Shanks, W.C.P., 2021, Multi-proxy record of Holocene paleoenvironmental conditions from Yellowstone Lake, Wyoming, USA: Quaternary Science Reviews, v. 274, p. 107275, doi:10.1016/j.quascirev.2021.107275.

Schiller, C.M., Whitlock, C., Elder, K.L., Iverson, N.A., and Abbott, M.B., 2021, Erroneously old radiocarbon ages from terrestrial pollen concentrates in Yellowstone Lake, Wyoming, USA: Radiocarbon, v. 63, no. 1, p. 321-342, doi:10.1017/RDC.2020.118.

Schiller, C.M., Whitlock, C., Alt, M., Morgan, L.A., 2020, Vegetation responses to Quaternary volcanic and hydrothermal disturbances in the Northern Rocky Mountains and Greater Yellowstone Ecosystem (USA): Palaeogeography, Palaeoclimatology, Palaeoecology, v. 559, p. 109859, doi:10.1016/j.palaeo.2020.109859.

Spanbauer, T., Brown, S.R., Cartier, R., **Schiller, C.M.,** Zahajská, P., Conley, D.J., Fritz, S.C., Theriot, E.C., Whitlock, C., 2018, Yellowstone Lake Coring Projects: Research with a History: Limnology and Oceanography Bulletin, v. 27, no. 1, p. 6–10, doi:10.1002/lob.10229.

Belanger, C.L., Orhun, O.G., **Schiller, C.M.,** 2016, Benthic foraminferal faunas reveal transport dynamics and no-analog environments on a glaciated margin (Gulf of Alaska): Palaeogeography, Palaeoclimatology, Palaeoecology, v. 454, p. 54-64, doi:10.1016/j.palaeo.2016.04.032.

CONFERENCE PRESENTATIONS

Zahajská, P., Stamm, F.M., Baldermann, A., **Schiller, C.M.,** and Conley, D., May 2024, The stubborn silica: Undissolved diatom frustules during sequential leaching: Isotopes in Biogenic Silica, Louvain-La-Neuve, BELGIUM. (Talk)

Lowe, A.J., Schmitz, M.D., Dillhoff, R., Dillhoff, T.A., Nares, F., **Schiller, C.M.,** Rember, W.C., Strömberg, C.A.E., December 2023, The terrestrial manifestation of Miocene climatic change in the Pacific Northwest (USA): Insights from the paleobotanical record: AGU (American Geophysical Union), San Francisco, CA. (Talk)

Schiller, C.M., Lowe A.J., Strömberg, C.A.E., Schmitz, M.D., Dillhoff, T.A., October 2023, Significance of short-term variability in Middle Miocene palynofloras of Oregon and Idaho: GSA (Geologic Society of America) Connects, Pittsburgh, PA. (Talk)

Schiller, C.M., Lowe A.J., Strömberg, C.A.E., Schmitz, M.D., Dillhoff, T.A., Fields, P.F., Taggart, R.E., October 2022, Evidence for volcanic disturbance in the Middle Miocene Succor Creek flora (Oregon and Idaho): GSA Connects, Denver, CO. (Talk)

Schiller, C.M., Whitlock, C., Brown, S.R., and Zahajská, P., May 2022, Holocene history of Lower Geyser Basin told through lake sediments: Biennial Scientific Conference on the Greater Yellowstone Ecosystem. (Talk)

Schiller, C.M., Whitlock, C., Brown, S.R., and Zahajská, P., October 2020, Lake sediment record of hydrothermal and ecological change in Lower Geyser Basin, Yellowstone National Park: GSA (Geological Society of America) Connects Online. (Talk)

Schiller, C.M., and Whitlock, C., June 2020, A Holocene geo-ecological history of Yellowstone's Lower Geyser Basin: AMQUA (American Quaternary Association) Virtual Biennial Meeting. (Poster)

Schiller, C.M., and Whitlock, C., September 2019, Decoupling the ecological response to changes in climate and hydrothermal activity in Lower Geyser Basin of Yellowstone National Park: GSA Annual Meeting, Phoenix, AZ. (Talk)

Schiller, C.M., Whitlock, C., Hurwitz, S., and Peek, S., September 2019, Palynostratigraphic control on sinter deposition in Upper Geyser Basin, Yellowstone National Park: GSA Annual Meeting, Phoenix, AZ. (Poster)

Schiller, C.M., Alt, M., and Whitlock C., July 2019, Quaternary vegetation responses to a range of volcanic disturbances in the Northern Rocky Mountains (USA): 20th International Quaternary Association (INQUA) Congress, Dublin, Ireland. (Talk)

Schiller, C.M., Alt, M., and Whitlock, C., April 2019, Vegetation responses to Quaternary volcanic disturbances in the Northern Rocky Mountains and Yellowstone National Park: Earth Sciences Student Colloquium, Bozeman, MT. (Talk)

Schiller, C.M., and Whitlock, C., October 2018, Radiocarbon dating pollen residues in a volcanic setting: GSA Annual Meeting, Indianapolis, IN. (Poster)

Brown, S.R., **Schiller, C.M.,** Fritz, S.C., Whitlock, C., and Morgan, L.A., October 2018, Ecological impact of postglacial hydrothermal explosion events in Yellowstone National Park inferred from Yellowstone Lake sediments: GSA Annual Meeting, Indianapolis, IN. (Talk)

Schiller, C.M., and Whitlock, C., April 2018, Dynamics of vegetation and hydrothermal explosions from Yellowstone lake, Wyoming: Earth Sciences Student Colloquium, Bozeman, MT. (Talk)

Schiller, C.M., Haueter, J.Z., Kunza, L.A., and Spaulding, S.A., May 2015, Historical abundance of *Didymosphenia geminata* in Grand Teton National Park, Wyoming: SFS (Society of Freshwater Science) Annual Meeting, Milwaukee, WI. (Poster)

Schiller, C.M., Haueter, J.Z., and Kunza, L.A., March 2015, Recent paleontological record of *Didymosphenia geminata* in Grand Teton National Park: Western South Dakota Hydrology Conference, Rapid City, SD. (Poster)

FUNDING

2023	U. of Washington Dept. of Biology Mary Race Bevis Postdoctoral Research Award ($1500) “Cenozoic Paleofire of the Pacific Northwest”
2022-2026	NSF EAR – Sedimentary Geology & Paleobiology ($559,325) “Postglacial history of a Yellowstone geyser basin: understanding hydrothermal geo-ecosystem dynamics over millennia” (co-written with PIs C. Whitlock, D.B. McWethy, Montana State U.)
2021-2023	NSF EAR – Postdoctoral Fellowship ($174,000) “Mid-Miocene climate, vegetation, and disturbance dynamics of the Pacific Northwest”
2020	Montana Institute on Ecosystems Yellowstone Graduate Fellowship ($10,000)
2019	GSA Student Travel Grant ($100) USNC/AMQUA INQUA Congress Fellowship Program ($600) Montana State U. Dept. of Earth Sciences Ph.D. Enhancement Award
2018	GSA Student Travel Grant ($125)
2014-2015	South Dakota School of Mines and Technology Dept. of Geology and Geological Engineering Seth Schaefer Geology Scholarship
2013-2014	South Dakota School of Mines and Technology Dept. of Geology and Geological Engineering Jane Spiece Memorial Scholarship

STUDENT RESEARCH

Busch, K., McWethy, D.B., **Schiller, C.M.,** and Whitlock, C., April 2024, A Holocene record of lodgepole pine forest fire and resilience in western Yellowstone: MSU Earth Sciences Student Colloquium, Bozeman, MT. (Poster)

Shelly, J., **Schiller, C.M.,** and Whitlock, C., April 2024, Vegetation and fire history of Rush Lake, Yellowstone National Park: MSU Earth Sciences Student Colloquium, Bozeman, MT. (Poster)

Lutes, J.L.N., **Schiller, C.M.,** and Strömberg, C.A.E., March 2024, Middle Miocene Climate and Landscape Stability in the Inland Pacific Northwest: UW Earth and Space Science Research Gala, Seattle, WA. (Poster)

Riley, A., **Schiller, C.M.,** and Strömberg, C.A.E., May 2023, Reconstructing plant communities from the Watersnake locality of the Sucker Creek Formation in southwestern Idaho using charcoal found in ash flow deposits: UW Undergraduate Research Symposium, Seattle, WA. (Poster)

Brooks, H.M., **Schiller, C.M.,** and Strömberg, C.A.E., May 2023, Validating fossil charcoal morphometry as a tool for determining fuel types of ancient fires: UW Undergraduate Research Symposium, Seattle, WA. (Poster)

TEACHING & ADVISING

2021-present	Undergraduate Research Advisor, "Team Fire" (Dept. of Biology, U. of Washington) BIOL 499, Undergraduate Research, (student-directed research, undergraduates A. DiCiro, H. Stephens, S. Lieberman, R. Nguyen, A. Reyna, A. Riley)
Fall 2020	Teaching Assistant (Dept. of Earth Sciences, Montana State U.) ERTH 212, Yellowstone: Scientific Laboratory (online/in-person hybrid lecture, lab)
Fall 2019	Instructor (Dept. of Earth Sciences, Montana State U.) ERTH 212, Yellowstone: Scientific Laboratory (lecture, lab, field)
2017-2018	Undergraduate Research Advisor (Dept. of Earth Sciences, Montana State U.) Volunteer and compensated research assistants (undergraduates S. Blessing, J. Eggers, A. Mausshardt, D. Quick)
Spring 2016	Teaching Assistant, Earth System Sciences (Dept. of Earth Sciences, Montana State U.) ERTH 101, Earth System Sciences (lectures, lab activities)
2014-2015	First-Year Peer Advisor, Teaching Assistant (Dept. of Geology and Geological Engineering, South Dakota School of Mines and Technology) IS 110/GEOL 110, Explorations (lab, grading, registration and course planning advising)

OUTREACH

2021-present	Public Microscopy Space (Burke Museum, U. of Washington) Palynology research in public-visible space (general public)
Fall 2019	Wonderlust Field Trip (Dept. of Earth Sciences, Montana State U.) Glacial geology field trip to Yellowstone National Park (general public)
Fall 2018	Climate Change Activity (Chief Joseph Middle School – Bozeman, MT) Climate change/palynology outreach (K-12)
2017-2019	Lab tours (Dept. of Earth Sciences, Montana State U.) Climate change/palynology outreach (undergraduate)
2017-2018	Science Action Club (Irving Elementary School – Bozeman, MT) General science outreach (K-12)
Spring 2017	MSU Nano/Microdays (Dept. of Earth Sciences, Montana State U.) Palynology outreach (general public)
2009-2013	Education Volunteer/Intern (Oregon Museum of Science and Industry – Portland, OR) General science/paleontology outreach (general public)

PROFESSIONAL MEMBERSHIPS

2022-Present	The Palynological Society (AASP)
2016-Present	American Quaternary Association
2012-Present	Geological Society of America (Cordilleran Section)
2014-Present	Alpha Chi Sigma Fraternity

SERVICE

2019-2020	Montana State University Earth Sciences Student Colloquium Chair
2018-2019	Montana State University Earth Sciences Student Colloquium Co-Chair
2014-2015	BΦ Chapter of Alpha Chi Sigma Alumni Secretary

Peer reviewer for *Ecology and Evolution*, *Geology*, *Geophysical Research Letters*, *Journal of Quaternary Science*, *PALAIOS*, *Palynology*, and *Radiocarbon*

Data steward for Neotoma Paleoecology Database