



November 3, 2018

Commissioner Clayton Christian
Office of the Commissioner of Higher Education
Post Office Box 203201
560 North Park Avenue
Helena, Montana 59620

Dear Commissioner Christian:

I am honored to have this opportunity to nominate **Dr. Cathy Whitlock**, Professor in the Department of Earth Sciences at Montana State University (MSU), for the distinguished honor of Montana Regents' Professor. Such a distinction is properly reserved for a very small number of faculty members who have demonstrated outstanding scholarship of truly international caliber, a true commitment to teaching and mentoring, and service at many levels both within and outside the University. Professor Whitlock meets all of these criteria.

Dr. Whitlock is an internationally recognized authority on the relationship between paleo-vegetation and fire and their relationship to past climate change. Her scientific discoveries on past ecosystem dynamics have informed global change science, resource management decisions, and conservation efforts. Dr. Whitlock's research in Yellowstone National Park during the fires of 1988 has led to new methods for reconstructing long-term fire histories: techniques now used around the world. Over the past 25 years, she has helped build a global paleo fire science community; including creating an international database that makes fire-history information available to all. Dr. Whitlock's research has moreover provided insights on the evolution of modern forest ecosystems and their sensitivity to climate change and human influences. Her work has led to an improved understanding of the vegetation and fire history of western North America, Ireland, southern South America, New Zealand and Australia based on pollen and high-resolution charcoal records. Finally, Dr. Whitlock's scholarship has provided information on ecological responses during past periods (when the world was colder and warmer than at present) to provide understanding of climate extremes, and confirm that climate is the primary driver of fire activity in most of the western U.S.

Dr. Whitlock has been recognized for her outstanding contributions with numerous awards and appointments, including her selection as a fellow of the *Geological Society of America* and the *American Association for the Advancement of Science*. In 2014, Dr. Whitlock received the international *E.O. Wilson Biodiversity Technology Pioneer Award*, which honors individuals who have made significant contributions to the preservation of biodiversity. Her dedication to research and mentorship has most recently earned her election to the *National Academy of Sciences*, one of the world's most distinguished accolades for scientists. **Dr. Whitlock is the first Montanan in history to receive this distinction.**

Office of the President

211 Montana Hall
P.O. Box 172420
Bozeman, MT 59717-2420
www.montana.edu

Tel (406) 994-2341
Fax (406) 994-1893

Dr. Whitlock earned her Ph.D. at the University of Washington in 1983. She served as a NATO Postdoctoral Research Fellow in the department of Botany at Trinity College, Dublin in 1983-4, and then as Assistant Curator of the Paleobotany section at the *Carnegie Museum of Natural History in Pittsburgh*. In 1988, she was appointed Assistant Professor in the Department of Geology and Planetary Sciences at the University of Pittsburgh. She was then appointed Associate Professor (1990-1995), and Professor (1995-2005) in the Department of Geological Sciences at the University of Oregon, and also served as the Head of the Department of Geography there from 2000-2004. She came to MSU as a Professor in the Department of Earth Sciences in 2004.

During her career, Dr. Whitlock has published over **200** peer-reviewed articles in some of the most prestigious venues in her discipline including a recent co-authored article in *Science*. She has also made over 100 invited presentations at universities and major professional meetings since 2000. Since her arrival at MSU in 2004, Dr. Whitlock has secured over \$30M in external funding including several major awards from the National Science Foundation (NSF). In addition to the honors listed above Dr. Whitlock's research has been recognized by a Distinguished Career Award from the *American Quaternary Association*, and a Professional Excellence Award from the *Association of Women Geoscientists*. She has also received MSU's *Charles and Nora Wiley Faculty Award for Meritorious Research* (2009) and has been a MSU Provost's Distinguished Lecturer (2014).

Dr. Whitlock's phenomenal research record has brought luster to Montana State University and the State of Montana. Her past research and more recent work as lead author and editor of the *Montana Climate Assessment* report will have a direct impact on the future of our state. This is a record of research achievement fully deserving of a Regents' Professorship.

Dr. Whitlock is passionate regarding the integration of her research with student learning. She is very proud that 22 of the 35 graduate students she has mentored during her career have been women and that these students have gone on to successful careers in academia, government, conservation organizations, and the private sector. Dr. Whitlock has also mentored postdoctoral researchers, served on numerous graduate committees, and supervised undergraduate research. As Director of the MSU Paleoecology Laboratory, Dr. Whitlock regularly hosts international scientists in her lab to who want to learn her techniques for reconstructing past climate, vegetation and fire. She teaches a variety of undergraduate and graduate courses for the Earth Science department at MSU and has an excellent reputation as an instructor and student mentor.

Professor Whitlock also has an outstanding record of service to her profession, the state of Montana, and to MSU. At MSU, she has served as Director for Interdisciplinary Initiatives in the office of the Vice President for Research and as Project Director and Lead Principal Investigator for a major NSF project: Wildfire Partnership in Research and Education project (or PIRE). She has also served as

the co-founding director of the *Montana Institute on Ecosystems*: a statewide institute shared between MSU and the University of Montana that draws on the extraordinary landscapes of our state to understand complex ecosystems including the interconnectedness of people and nature. In this role, Dr. Whitlock has been able to guide state, regional and national agendas on climate change and its impacts, hire new interdisciplinary Montana University System faculty, and lead major research and education initiatives. At MSU, she has also served on numerous important university and departmental committees.

In terms of professional service, Dr. Whitlock currently serves on the editorial boards of four major peer-reviewed journals in her fields and has served on an additional four journal editorial boards in the past. She has served as Vice-President, President-Elect, President and Past-President of the *American Quaternary Association*, and on numerous important committees and grant review panels for the NSF.

Her service to the state of Montana is particularly impressive. Her recent work as lead author and editor of the *Montana Climate Assessment* has already been mentioned. This effort is part of long-term enterprise to provide Montana citizens with timely information that addresses real-world environmental challenges. Dr. Whitlock has also served as co-host and co-chair of the *11th Biennial Yellowstone Science Conference*. As the MSU co-Director of the *Montana Institute on Ecosystems*, she led the first statewide institute designed to promote interdisciplinary research on pressing environmental challenges.

Dr. Cathy Whitlock is an internationally recognized scholar and academic leader who truly believes in service and uses her passion for environmental science to inspire and encourage others, including her MSU students, faculty colleagues, and the citizens of Montana. Her election to the National Academy of Sciences affirms Dr. Whitlock's stature as an ecological and environmental scientist. Her work could not be more relevant for our state and our nation at this time.

I am deeply proud to have her as a faculty member at Montana State University and delighted to nominate Dr. Whitlock for a Montana Regents' Professorship.

Thank you for your consideration.

Sincerely,



Waded Cruzado
President