December 1, 2017 President Donald J. Trump The White House 1600 Pennsylvania Ave., NW Washington, DC 20500

## Dear President Trump:

As scientists, researchers, and academic organizations, we are writing in support of the scientific resources located within the current designated boundaries of Grand Staircase-Escalante National Monument. The bounding of the Monument is consistent with scientific resources specifically identified in the 1996 presidential proclamation in which 1.7 million acres of Federal land was set aside under Section 2 of the American Antiquities Act, later expanded by a 1998 agreement with the State of Utah.

Included within the boundaries of the Monument is a visually arresting landscape rich in geological, paleontological, archeological, cultural, and biological resources that are best studied at a large spatial scale. Fragmenting the Monument into a series of smaller units or reducing its size greatly diminishes the resource values identified in the 1996 proclamation. Since its inception, the Monument has served as an important living laboratory, and we want to see that continue.

In consideration of paleontological resources, the Monument hosts one of the highest concentrations of dinosaur fossils in the world and the "only evidence in our hemisphere of terrestrial vertebrate fauna, including mammals of the Cenomanian-Santonian ages" (Proclamation 6920). The Kaiparowits Plateau has yielded one of the most complete records of Late Cretaceous vertebrate evolution, recording the rise of many modern fish, mammal, turtle, and reptile groups. In the last 10 years alone, more than 25 new taxa have been described, including the dinosaurs *Lythronax argestes, Teratophoneus curriei, Utahceratops gettyi*, and *Diabloceratops eatoni*. Only 6% of the Monument has been surveyed to date. The potential for future discovery is tremendous.

The Monument is biologically diverse and contains a significant percentage of Utah's rare and endemic plant species and is the richest bee landscape reported to date. For example, of a total statewide flora comprising approximately 2,600 species, nearly 85% are found in the Monument. Utah has one of the highest rates of plant endemism in North America and nearly 10% of the Utah flora—more than 200 species—are endemic. Approximately 50% of these species are found within the Monument. More than 650 bee species are now described from the Monument. By comparison, there are only about 200 bee species reported for all of New England.

The physical landscapes of which the monument is comprised are diverse and often of great natural beauty. They are also landscapes of meaning to modern Puebloan and Paiute Native Americans as well as the descendants of Mormon settlers. For archaeologists, the Monument holds *cultural* landscapes that span perhaps 14,000 years of occupation. These archaeologically defined peoples—including the Ancestral Puebloan groups known as the Virgin, Kayenta, and Fremont—used the landscape in different ways, sometimes interacting with one another, sometimes not. The complexity of their individual sequences of occupation, variability of subsistence practices, and settlement systems creates a mosaic of site types that can only be preserved on a regional scale. What is special is the *wholeness* of the archeological record on the monument and our ability to study it in its natural setting.

Rangeland management studies have a direct impact on current and future land use. The Monument represents an important infrastructure that facilitates integrated and broad-scale applied research on issues of improved rangeland management and sustainability. Since its inception, the Monument has been the focus of a broad array of research investigations focused on issues such as managing and restoring sustainable rangeland ecosystems. For example, forest and grassland ecosystems form the backbone of rangeland cattle grazing in much of the western US. Deterioration in the physical and biological integrity of rangelands worldwide diminish the capacity of these systems to support human livelihoods, resulting in outmigration of populations from areas dependent on these systems. One researcher sampled over 500 locations across the Monument to provide the first evaluation of rangeland health at a large scale.

We the undersigned affirm these extraordinary multi-disciplinary scientific contributions and the potential for future research and discovery in the Grand Staircase-Escalante National Monument.

Sincerely,

CC:

Secretary, The U.S. Department of the Interior, Ryan Zinke

Society of Vertebrate Paleontology
Paleontological Society
University of Utah
University of Colorado
Weber State University

**Archaeology Southwest** 

Desert Archaeology

Millcreek Mining Group

Museum of Northern Arizona

Natural History Museum of Utah

Utah Master Naturalist Program

Wild Utah Project

Bridgerland Audubon

Yellowstone to Uintas Connection

Ody Brooks Nature Sanctuary

Colorado Plateau Archeological Alliance

Douglas A. McFadden, MA, RPH, Archaeologist, Kanab, UT

Andrew Helfrich, Fishery Biologist, Logan, UT

Christa Sadler, Geologist and Author, Flagstaff, AZ

Brenda Bowen, Director of the Global Change and Sustainability Center – University of Utah

David D. Gillette, Colbert Curator of Vertebrate Paleontology – Museum of Northern Arizona

Sam Rushforth, Dean of Science, Emeritus – Utah Valley University

Dr. John T. Longino, Adjunct Curator of Entomology – Utah Museum of Natural History

Brian F. Codding, Assistant Professor of Anthropology - University of Utah

Dr. Keith Watts, Geologist, Boulder, UT

Bryce Cowan, Biology, Cedar City, UT

C. Riley Nelson, Biology Professor - Brigham Young University

Casey Brucker, Ecology, Logan, UT

Chris Jimmerson, Environmental Scientist, Citrus Heights, CA

Barry P. McPherson, Fishery Biologist, Newport, OR

Chris Tellesbo, Physics, Salt Lake City, UT

Connie Mutel, Senior Science Writer, Hydroscience and Engineering – University of Iowa

Cynthia F. Bartels, Research Operations Manager, Cleveland, OH

Dana Carroll, Biochemistry, Salt Lake City, UT

Daniel L. Dustin, Professor, Outdoor Recreation Studies – University of Utah

David H. Kesler, Retired Biology Professor – Rhodes Colleges

David W. Johnson, PhD, Ecology Professor - The University of Manchester

Brian Cowan, Environmental Health, Cedar City, UT

Constantine Georgopoulos, PhD, Biochemistry Research Professor — University of Utah

David K. Elliott, Professor of Geology - Northern Arizona University

Deborah Ang, Research Associate, Molecular Biology – University of Utah

Student Organization for Society and Natural Resources, Logan, UT

Erin Irish, Associate Professor of Biology – University of Iowa

Diana Meryett, Paleontology, Kanab, UT

Dr. R. Edward Grumbine, Director – North Rim Ranches, Grand Canyon Trust

William James, Resource Interpretation, Kanab, UT

EnviroClub, University of Utah

Elaine Jacobs, Geologist, Los Alamos, NM

Dr. Charles Saltzman, Chairman of the Department of Orthopaedics – University of Utah

Dr. Charles Smith, MD, Teasdale, UT

Eric A. Rickart, Curator of Vertebrate Zoology – Natural History Museum of Utah

Benjamin Burger, Professor of Biology – Utah State University

Fran Bagenal, Research Scientist, Geophysics – University of Colorado

Gabriel-Philip Santos, Collections Manager, Paleontology – The Webb Schools

Julia Corbett, Professor of Environmental Humanities – University of Utah

Gil Mull, Geology, Salt Lake City, UT

Glenn Matlack, Associate Professor, Forest Ecology - Ohio University

Hollie Pettersson, PhD, Science Education, Salt Lake City, UT

Jon Seger, Curator of Dinosaurs – Denver Museum of Nature & Science

 $\label{eq:substitute} Justice\ Morath,\ Assistant\ Professor,\ Psychology-Salt\ Lake\ Community\ College$ 

James Catlin, PhD, Founder – Wild Utah Project

Dr. Rebecca L. McKean, Associate Professor of Geology – St. Norbert College

Janet E. Lindsley, PhD, Associate Professor of Biochemistry – University of Utah

Jeff Rose, Assistant Professor, Parks, Recreation, and Tourism – University of Utah

Jess Lofland, Conservation Ecology – Utah State University

Deborah Whorley, Biology, Kanab, UT

Ascent Counseling, Psychotherapy, Salt Lake City, UT

Jessica Pierson, Geographic Information Science – Oregon State University

Joanne Avery, Geology, Monticello, UT

Kelly S Bricker, Professor, Parks, Recreation, and Tourism – University of Utah

Kelsy Konkright, Geology – University of Nevada, Las Vegas

Kevin Christiopherson, Wildlife Biology, Washington, UT

Kevin Jones, Archaeology, Pleasant View, CO

Laura Kao, Botany, Bloomington, IN

Matthew Johnson, Applied Environmental Geoscience – Weber State University

Lauren Nickell, Geology and Outdoor Recreation in Parks and Tourism, Cedar City, UT

Jared S. Warren, PhD – Brigham Young University

Lawrence Stevens, Curator of Biology – Museum of Northern Arizona

Loreen Allphin, Associate Professor of Plants and Wildlife Sciences – Brigham Young University

Marcia Ginney, Education, Placerville, CA

Marsha Holland, Southern Utah Oral History Project

Steven R. Simms, PhD, Professor of Archeology – Utah State University

Sue deVall, Retired Biologist, Castle Valley, UT

Martin Rechsteiner, PhD, Distinguished Professor Emeritus, Biology – University of Utah

Marry Conner, Wildlife Biologist, Logan, UT

Melinda Hurlbut, Geology, Orem, UT

Michael L. Scott, Research Riparian Ecologist, Fort Collins, CO

Naava Honer, Vertebrate paleontology, Bexley, OH

Marjorie Lopez Read, Retired Environmental Scientist, Moab UT

Neysa Hardin, Librarian, El Paso, TX

Peter Bungart, Archaeology, Flagstaff, AZ

Ralph E. Molnar, Retired Senior Curator of Vertebrate Fossils – Queensland Museum

Richard G. Baker, Professor Emeritus, Earth and Environmental Sciences – University of Iowa

Richard Steiner, Professor Emeritus Chemistry – University of Utah

Robert Smith, Geology – University of Utah

Robin Kundis Craig, James I. Farr Professor of Law – University of Utah S. J. Quinney College of Law

Rolf Johnsson, Environmental Engineer, Holladay, UT

Ronald Lanner, Plant Biology, Placerville, CA

Roslynn McCann, Associate Professor in Sustainable Communities – Utah State University

Ellen Bailey, Water Quality Program Coordinator – Utah State University

Sara Porterfield, History, Boulder, CO

Scott Zimmer, Ecology, Logan, UT

Richard Pimentel, Wildlife and Fisheries Biologist, Park City, UT

Stephen Trimble, Naturalist and Writer, Torrey, UT

Steven J. Mueller, Research Ecologist, Cedar Springs, MI

Tim Duane, Professor of Environmental Studies – University of California, Santa Cruz

Tim Formosa, Biochemistry, Salt Lake City, UT

Tim Woodruff, Environmental Studies, Logan, UT

Weston C. McCool, Archeology – University of California, Santa Barbara

Dr. Brenda L. Bass, PhD, Distinguished Professor of Biochemistry, University of Utah

Shane Macfarlan, Anthropology – University of Utah

Wayne Ranney, Field Geologist, Flagstaff, AZ

Wendy Wischer, Assistant Professor – University of Utah

William D. Newmark, PhD, Vertebrate Zoology Research Curator – Natural History Museum of Utah

Kevin Padian, Professor and Curator of Paleontology and Evolution – University of California, Berkley

Tim Graham, Independent Researcher, Arthropod Ecology, Moab, UT

Tim Weltzel, Independent Researcher, Archeology, Iowa City, IA

Patricia Holroyd, Senior Museum Scientist – University of California Museum of Paleontology

Robert J. Gay, Education Director – Colorado Canyons Association

Kelley Hays-Gilpin, Curator of Anthropology – Museum of Northern Arizona

Dennis Gilpin, Archaeologist, Flagstaff, AZ

Janet Whitmore Gillette, Natural Science Collection Manager – Museum of Northern Arizona

Deborah Lewis, Herbarium Curator – Iowa State University

Dr. William M. Zales, Professor of Ecology, Westfield, IA

Catherine A Forster, Professor of Geology – George Washington University

Matthew Browning, Assistant Professor, Recreation Sport and Tourism – University of Illinois Urbana-Champaign

Walter Fertig, PhD, Botanist, Olympia, WA

Daniel McCool, Professor of Political Science – University of Utah

Robert Mutel, Professor of Astronomy – University of Utah

Byron Adams, Professor of Biology and Curator of Mesofauna – Monte L. Bean Museum

Christopher Tyrrell, PhD, Curator of Botany - Milwaukee Public Museum

Patricia Coorough Burke, Curator of Geological Collections – Milwaukee Public Museum

Christa Nickel, Audiology – University of Utah

Marianne Barrier, Research Scientist, Raleigh, NC

Drew Peltier, Researcher, Tree Physiology - Northern Arizona University

Phil R. Geib, Professor of Practice, Archeology – University of Nebraska, Lincoln

Thomas D. Sisk, Olajos-Goslow Chair of Environmental Science and Policy – Northern Arizona University

Eric C. Ewert, PhD, Professor of Geography – Weber State University

Ian Miller, Curator of Paleobotany – Denver Museum of Nature & Science

Peter Skidmore, Professional Geologist, Bozeman, MT

Natalie Toth, Fossil Preparator, Aurora, CO

Joel C. Janelski, Emeritus Professor of Anthropology – Brigham Young University

Michael Fell, Research Associate, Biology - Northern Arizona University