

# iFAST: The International Forum on Advanced Environmental Sciences and Technology

*A series of distinguished seminars by eminent scientists*

8 a.m. CDT, 9 a.m. EDT; 1 p.m. GMT, 9 p.m. China

Wednesday, Sept 28, 2022



**DIANA WALL**  
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<http://www.biology.colostate.edu/faculty/dwall>

D. WALL is a University Distinguished Professor, the inaugural director of the School of Global Environmental Sustainability and a professor of Biology at Colorado State University. Wall is the science chair of the Global Soil Biodiversity Initiative (GSBI) and a co-chair of SoilBON research network. Her research examines how climate change impacts soil biodiversity, particularly soil invertebrates, and how they interact to provide healthy soils, ecosystem services and nutrient cycling. Her research on global scale studies of soil biodiversity are hallmarks of her career. Her 35+ seasons examining responses of soil foodwebs to climate change in earth's lowest diversity soils in Antarctica was recognized with the designation of Wall Valley, Antarctica. Wall is a 2013 Tyler Prize Laureate for Environmental Achievement, was honored with the 2012 SCAR President's Medal for Excellence in Antarctic Research, the Ulysses Medal in 2013 by University College Dublin, the 2019 President's Medal of the British Ecological Society and she has served as president of the Ecological Society of America and Society of Nematologists. She is an elected member of the National Academy of Sciences. She received a Bachelor of Arts degree and a doctoral degree at the University of Kentucky, Lexington.

## Climate change hits below ground life in polar and hot deserts: role of soil biodiversity in ecosystem processes

Understanding extreme arid ecosystems such as the hot Chihuahuan desert (New Mexico USA) and cold Antarctic desert of ice-free lands provide a basis and insights for understanding the response of soil biodiversity to increasing environmental extremes such as with climate change. Compared to the hot desert with plants and deep soil profiles, polar deserts have shallow soils, low soil carbon, and no vascular plants or animals above ground. Nematodes dominate in abundance and are defined by species-specific soil habitats. Through long-term observations, manipulative experiments and studies across geographic gradients we examined responses to climate change. Our results indicate that climate change in this polar ecosystem alters soil habitat suitability, species distribution, community composition and ecosystem functioning, all with potential impact. Resilience of these ecosystems and policy implications will be discussed in a context of global soil biodiversity and function.



INSTITUTE FOR ENVIRONMENTAL GENOMICS  
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Zoom webinar ID: 934 8142 2012 (<https://zoom.us/j/93481422012>)

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