



## **DAVID MILDREXLER**

Oregon State University, College of Forestry, Department of Forest Ecosystems and Society

### **Degrees:**

M.S. Forest Science, University of Montana

B.S. Environmental Science and Resources, Portland State University

### **Advisor:**

Warren Cohen, Ph.D.

### **Scholar Award Donor:**

Cindy & Duncan Campbell

### **About the Scholar:**

Forest stress and mortality associated with drought and high temperature are increasing due to a warming climate, and projections indicate more extreme conditions in coming decades. David is developing a new forest vulnerability index associated with drought and high temperatures across the Pacific Northwest. This work will address forest managers' urgent need to datasets to understand how vulnerable forests are to global warming, enabling them to adjust management priorities and actions in response.

### **Benefits to Society:**

This work will help define management goals for interior moist forests based on the ecology and restoration needs of these unique forest ecosystems. By advancing understanding of the vulnerability of forests to climatic changes expected to significantly worsen in coming decades, David's work will help society understand how forests of the PNW are changing, and the ecological consequences. Specific products from this work, particularly fine-grained maps of forest vulnerability, will be relevant to forest managers, ecosystem scientists, social scientists, and non-governmental organizations. The index could be applied to other geographical areas, giving it potential to serve as an important new tool for future Earth system science research.

### **Awards and Honors:**

Oregon Lottery Graduate Scholarship

Schutz Family Fellowship

James H. Dukes, Jr. Graduate Fellowship

Provost's Distinguished Graduate Fellowship

Oregon State Tennis Champion 1990

### **Publications and Posters:**

Goetz, S. J., B. Bond-Lamberty, B. Law, J. Hicke, R. A. Houghton, S. McNulty, T. O'Halloran, A. J. H. Meddens, E. M. Pfeifer, **D. J. Mildrexler**, and E. Kasichke. 2012. Observations and assessment of forest carbon recovery following disturbance in North America. *J. Geophys. Res.*, 117, G02022.

**Mildrexler, D. J.**, M. Zhao, and S. W. Running. 2011. A global comparison between station air temperatures and MODIS land surface temperatures reveals the cooling role of forests. *J. Geophys. Res.*, 116, G03025.

**Mildrexler, D. J.**, M. Zhao, and S. W. Running. 2011. Satellite finds highest land skin temperatures on earth. *Bull. Amer. Meteor. Soc.*, 92, 855–860, doi: 10.1175/2011BAMS3067.1

**Mildrexler, D. J.**, M. Zhao, and S. W. Running, 2009. Testing a MODIS Global Disturbance Index across North America. *Remote Sens. Environ.*, 113, 2103-2117.

- Mildrexler, D. J.**, M. Zhao, F. A. Heinsch, and S. W. Running, 2007. A New Satellite Based Methodology for Continental Scale Disturbance Detection. *Ecol. Appl.*, 17(1), 235-250.
- Mildrexler, D. J.**, M. Zhao, and S. W. Running. 2006. Where are the hottest spots on Earth? *Eos Transactions*, 87(43), 461, 467.
- Mildrexler, D. J.**, M. Zhao, and S. W. Running. Poster for Global Vegetation Workshop, Missoula, MT. Testing a MODIS Global Disturbance Index Across North America, (2009).
- Mildrexler, D. J.**, M. Zhao, and S. W. Running. Poster for Global Vegetation Workshop; Missoula, MT. A New Satellite Based Methodology for Continental Scale Disturbance Detection (2006).
- Mildrexler, D. J.**, M. Zhao, and S. W. Running. Poster for ESA Annual Meeting; Montreal, Quebec. New Innovative Uses of the Aqua/MODIS Land Surface Temperature Product, (2005).
- Mildrexler, D. J.** Poster for ESA Annual Meeting; Spokane, WA. Landscape Analysis of four land units, Eagle Summit Interior Alaska, (1999).