

## Jeffrey Warren



**Scientist, Ecosystem Observations and Experiments**

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Jeffrey M. Warren is an environmental scientist who investigates ecosystem response to environmental change in the Ecosystem Observations and Experiments group of ORNL. His research interests include how forest ecophysiology is impacted by changes in the environment, including consequent interactions within and across species and how cascading effects are exhibited at higher trophic and scalar levels. His research investigates how terrestrial ecosystems adapt to changes in the environment, including subtle or severe abiotic or biotic disturbances that have some logical (although often unanticipated) impact on ecosystem processes.

Warren was previously employed as a postdoctoral research forester with the Department of Agriculture Forest Service where he collaborated with scientists from the Environmental Protection Agency and Oregon State University to address plant water uptake, transport and scaling dynamics within soil, mycorrhizae, roots, seedlings, and trees. Prior to this postdoctoral position, he investigated the effects of enhanced UV-B radiation on foliar biochemistry and tree-insect relations at Washington State University (where he obtained his PhD in tree physiology) and the effects of irrigation and fertilization on tree growth-differentiation balance at North Carolina State University (where he received his MS in forest science).

Warren is currently involved in two projects at ORNL: “Response of ecosystems to climate change” and “Neutron imaging of soil-plant systems.” The former project studies how climate change will expose terrestrial ecosystems to increased atmospheric CO<sub>2</sub> concentrations, warmer temperatures and altered precipitation regimes in the future, while the later project explores how neutron imaging may be used to assess soil and root water transport phenomenon.

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