

## Complex ecosystems understood by us maximize nature's resilience?

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Jennifer Couzin-Frankel introduced the roots of resilience (1). Kathy J. Willis et al. questioned what makes a terrestrial ecosystem resilient? (2). The nature's resilience can be explained by thermodynamics (3). We assume ecosystems maximize nature's resilience. Using a simple ecosystem mathematical model, Roger Cropp et al. showed ecosystems maximize nature's resilience (4). Britta L. Timpane-Padgham et al. summarized a systematic review of ecological attributes that confer resilience to climate change in environmental restoration (5). Britta L. Timpane-Padgham et al. stated that the need to understand the dynamic nature of ecological systems, especially in the context of climate change, is crucial for successful restoration work (5). Improving our understanding of how certain ecological attributes confer resilience will help practitioners develop best practices for successful restoration in a changing climate (5). Not a simple ecosystem, but complex ecosystems understood by us are really able to maximize nature's resilience?

1. Jennifer Couzin-Frankel, The roots of resilience, *Science* 02 Mar 2018: Vol. 359, Issue 6379, pp. 970-971
2. Kathy J. Willis et al., What makes a terrestrial ecosystem resilient?, *Science* 02 Mar 2018: Vol. 359, Issue 6379, pp. 988-989
3. N.D. Hari Dass , *The Principles of Thermodynamics*
4. Roger Cropp et al., Ecosystem Adaptation: Do Ecosystems Maximize Resilience? *Ecology*,83(7), 2002, pp. 2019–2026
5. Britta L. Timpane-Padgham et al., A systematic review of ecological attributes that confer resilience to climate change in environmental restoration  
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