

## **Climate, fire, and trade-offs between conifers**

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Unexpected shifts in species composition and ecosystem function are possible given novel disturbances and projected climate warming. In Greater Yellowstone (Wyoming, USA), warm/dry periods are characterized by stand-replacing forest fires that may be followed by reduced tree regeneration and increased drought-tolerant species; the opposite is true of cool/wet periods. How do biotic and abiotic interactions play out over the long-term? Paleoecological data indicate that present-day forest associations established in the middle Holocene with the onset of cooler wetter conditions. Overlying this long-term trend, however, local species dominance has fluctuated with climate variability and climate-fire interactions during the last 5000 years.