

Which Plants Will Survive Climate Change?; Streams Are Doing Great



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[Rebecca Greenfield](#) 267 Views Apr 9, 2012

Discovered: What makes plants better at being thirsty, climate change hasn't had a horrible impact on streams, forest might save us from our climate change woes and snowy areas are in trouble.

- **Which plants will survive climate change?** Well, we don't know yet. But science has discovered a way to figure it out, identifying what makes certain plants more drought resistant than others. And, it's kind of surprising: The saltiness of cell sap determines its drought resistance. "The salt concentrated in cells holds on to water more tightly and directly allows plants to maintain turgor during drought," explains researcher Christine

Scoffoni. (High turgor pressure prevents a plant from wilting and dying.) Knowing what keeps certain plants going during droughts might prove pretty useful in the coming, warming years. "We're excited to have such a powerful drought indicator that we can measure easily," said another researcher Megan Bartlett. "We can apply this across entire ecosystems or plant families to see how plants have adapted to their environment and to develop better strategies for their conservation in the face of climate change." [[UCLA](#)]

- **The streams are doing great.** Things are getting warmer, but that warmth hasn't affected streams much. Of 17 out of 19 sites that had seen temp increases over a 20- to 60-year period, only seven of those places had "streamflow" decreases. This is encouraging because it maybe means ecosystems can adapt to all this change. "It appears that ecosystems may have some capacity for resilience and adapt to changing conditions," explains researcher Julia Jones. "Various ecosystem processes may contribute to that resilience. In Pacific Northwest forests, for example, one hypothesis is that trees control the stomatal openings on their leaves and adjust their water use in response to the amount of water in the soil," she continues. Nature's pretty smart, it seems. [[BioScience](#)]
- **The forests might change us from our climate change woes.** An unsuspecting hero! Forests via trees and plants hold a lot of carbon that would otherwise float up into the atmosphere. And these life-savers, at least in Massachusetts, are making a comeback. "The rebounding forests of New England provide a tremendous public benefit by storing carbon that would otherwise contribute to climate change," said researcher Jonathan Thompson. To put these findings into context he adds, "In Massachusetts, forests capture approximately 2.3 million metric tons of carbon each year. That's equal to the amount of carbon dioxide emitted from the energy used by one million American homes annually." So, then, we should plant more trees, right? [[Harvard](#)]
- **Snowy areas are in trouble.** "The vulnerability of cool, wet areas to climate change is striking," explains researcher Julia Jones, who looking at long term data, determined bodies of water in warmer climates were more resilient to climate change. In the short term, as someone from a snowy, cold place, this sounds divine. But probably over the long-term this means more meltage and less water and a whole domino effect of badness. [[LTER](#)]

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