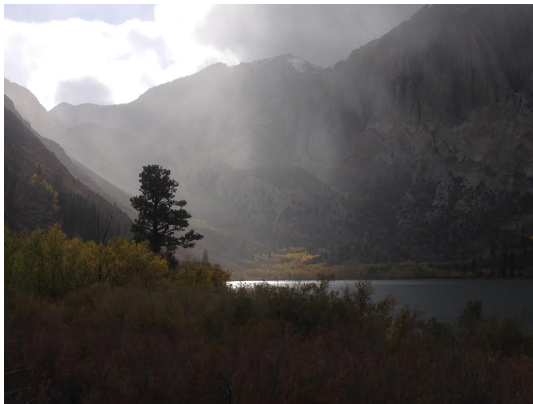


IT'S ALL CONNECTED

Inspiring ↔ Informative ↔ Actionable

presented by



Change Is A Fact Of Life

Nature is a dynamic and ever-changing system, constantly in motion and subject to various forces and processes that form the landscapes, ecosystems, and organisms. This dynamic quality is readily observable in our geology, ecology, climate, and biology, as well as from human impacts.

Let's take a quick look at the various inputs which mold our natural world through time:

- Geological changes arise from plate tectonics, erosion and deposition, all of which shape and reshape the surface of the planet. The continual movement of tectonic plates lead to the formation of mountains and ocean basins due to earthquakes and volcanic activity. Forces of erosion, such as wind, water, and ice, continuously alter the Earth's surface by wearing down mountains, carving out valleys, and depositing sediments in new locations. These ongoing processes over geological time scales cause Earth's topography to change dramatically.
- Climatic variability encompasses effects from both seasonal fluctuations as well as climate change. On an annual basis, nature experiences the different seasons which bring varied temperature, precipitation, and daylight hours, affecting plant growth, animal behavior, and ecological processes. Large scale climate deviations and long-term changes may be attributed to factors like solar radiation, greenhouse gas concentrations, ocean currents, and volcanic activity, all of which contribute to shifts in climate patterns over geological epochs and shorter periods. On a grander scale, did you know that [Earth's orbit changes over time](#) bringing us closer to the sun which may have been a factor for the Ice Ages in our distant past?
- Ecological adaptations in nature are a direct result of evolution and succession. The dynamism of nature is most easily seen through evolution when organisms adapt to

changing environments over time through natural selection. Species evolve, and new ones arise, while others go extinct in response to ecological pressures and opportunities. Ecological succession in ecosystems may be hastened by disturbances like fires, hurricanes, or volcanic eruptions. Events like these help initiate succession, a process in which new species gradually replace existing ones, because of nature's remarkable ability to recover and adapt to changing conditions.

- Biological interactions such as predator-prey and symbiotic relationships play a big role in nature dynamics. The relationships between predators and prey are in constant flux: as predator populations increase, prey populations decrease, leading to a decrease in predator populations and a subsequent increase in prey populations. This continual back and forth is essential for ecosystem stability. Similarly, symbiosis in nature results from mutualistic, commensal, and parasitic relationships among species that evolve and respond as environmental conditions and species compositions shift.
- Human activities such as deforestation, urbanization, pollution, and climate change, have introduced unprecedented challenges and instability into natural systems. Often, these ecosystems are weakened tremendously by human-induced alterations highlighting the fragility and susceptibility of nature to external pressures. Much of the change we have created in nature occurs at a much faster rate than it can adapt which is why it is important to work on restoration and sustainability measures whenever and wherever possible.

Nature is inherently dynamic and constantly on the move which is a testament to the Earth's resilience and adaptability, as well as the interconnectedness of all living and nonliving elements. Recognizing the non-static nature of the natural world is crucial for understanding and managing ecosystems, mitigating the impacts of climate change, and preserving the biodiversity and ecological balance that sustains life on Earth.

Don't Fall For It

Some long held beliefs push the need for severe Fall yard clean-up and we'd like you to rethink this pattern. If you are interested in promoting biodiversity, creating more wildlife friendly habitat, and generally want to garden more sustainably, please refer to this [short article](#) with reminders about better Fall yard and landscape practices. [Xerces Society](#) is another bounty of information about helping wildlife in your yard.

Help Wildlife This Fall

Turn off all unnecessary outdoor lighting as bird migration gets into full swing. Less light not only helps birds, but many other animals rely on natural light as well. Start a conversation and help get the word out to others who might benefit from the knowledge that less light helps animals.

Also, did you know that those fake Halloween webs are traps for many small birds, bats, and lots of insects? Consider removing them and reminding your neighbors as well. Your critter friends will thank you.



Quick Connections

Books, websites, documentaries, podcasts, events, quotes, and more



Parks Are For Everyone

Check out this amusing collection of [1-star reviews](#) of National Parks. And, then see how Amber Share, an artist, created [travel posters](#) based on some of these [1-star reviews](#).



Love Owls?

Check out the Cornell Lab free downloadable poster of [The Wonderful World of Owls](#). For more hoots, here is a [short article](#) from Audubon discussing how to find owls in urban settings.



Birds of a Feather

On November 1, [Project Feederwatch](#) gets started for the season. Join in and help bird research. For more information about feeding birds, tune in to the [Jumpstart Nature](#) podcast as well as [Nature's Archive](#), both of which highlighted this topic recently.



More Recycling Options

An enthusiastic young reader, Conner, shared an [additional resource for recycling](#) clothing/textile and other household items worldwide. Please check it out and many thanks to Conner for reaching out.

Community Connections

We want to connect with you. Some changes take eons, but others happen more quickly. What have you noticed in the nature around you? We read each and every response and will share selected reader stories in upcoming newsletters.

Share With Us

Your feedback is important. [Tell us](#) how we are doing and what you would like to see covered in future newsletters.

Every connection counts! Please help us grow our community of everyday heroes by sharing this newsletter with a friend or colleague.

Thank you,

Michael Hawk, Founder

Jumpstart Nature

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