

Wilderness



The Biological Web of Life

According to author and naturalist Henry David Thoreau, *"In wildness is the preservation of the world."*

The Wilderness Act mandates the preservation of wilderness in its natural condition, which perpetuates Nature's own processes and conserves biological diversity, or biodiversity. Wilderness is essential to the preservation of biodiversity—the variety of plants

and animal species—a synergistic environment in which all living organisms are interconnected with naturally occurring processes and ecosystem diversity. Human, plant and animal survival may ultimately benefit from the survival of natural areas like wilderness.

Why Wilderness is Important to The Biological Web of Life

The science of biology studies life and living systems where they exist. Natural disturbances like floods or fires maintain natural processes, systems and patterns, while large tracts of undisturbed habitat protect wildlife and biodiversity. In today's world, human-caused changes to Nature threatens biodiversity by driving species to the edge of extinction, fragmenting and degrading—or destroying—habitats and communities and dispersing or losing genetic variation within species as populations diminish or disappear. By assuring undisturbed landscapes, wilderness holds together and connects all life and systems protected within its borders.

Biodiversity requires a landscape dominated by self-supporting ecosystem processes, and wilderness provides this setting for the preservation of both plant and animal species and their historic

genetic traits, all of which furthers the maintenance of Earth's evolutionary potential. Because wilderness areas contain both the natural processes and biodiversity that provide opportunities to study our world in an undisturbed state, wilderness preservation helps scientists understand or unlock the biological secrets of the world.

One such secret is the number of species currently living on Earth. Scientists estimate that the number falls between 5 million and 300 million, which is a big jump from the roughly 1.75 million species that have been formally described and given official names. Collecting expeditions routinely discover many undescribed species by searching inaccessible environments—such as can be found in remote natural lands and wildernesses.

"In God's wilderness lies the hope of the world—the great fresh, unblighted, unredeemed wilderness."

—John Muir, naturalist, author and founder of the Sierra Club