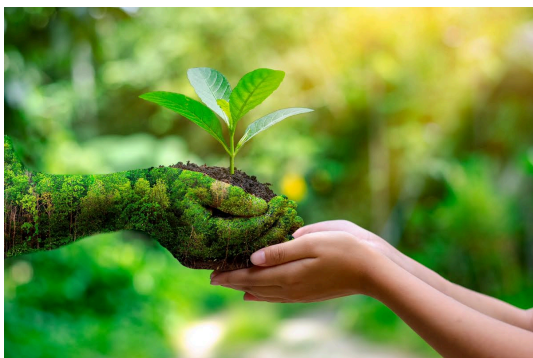


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# IT'S ALL CONNECTED

Inspiring ↔ Informative ↔ Actionable  
presented by



## How Do I Love Thee?

Love is in the air, so don't forget to show your love for all of us, human and not human, flora and fauna, biotic and abiotic, on this St. Valentine's Day. There are ways to make a difference for the greater good that helps sustain biodiversity, lower your carbon footprint, and show your loved ones that you care about their future here on planet Earth. Dr. Jonathan Foley at Project Drawdown replies "You tell me" when

asked the question: "What is the best climate action I can take?" The answers will vary for everyone, so consider spending about two minutes reading Dr. Foley's [article to begin your journey and identify some actions you may add into your routine](#). And, if you still need ideas of where to begin taking stock, check out our list of [steps you can take](#) and see which shoe fits for your situation and interests.

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**Lab Coat Not Needed**

Participatory science, community science, and citizen science are all terms old and new referring to people's contributions to science and conservation by documenting nature observations wherever they go. As you can imagine, scientists alone can't be everywhere and lack the funding to study what is "normal" and document how fast things are changing. That's where participatory science enters the picture - a cadre of locals who take the time to watch, listen, and document what they see. This "crowdsourcing" of people using technology available in this age creates a massive amount of data available for research and conservation efforts. Despite the uneven signal-to-noise ratio that is inevitable with gathering layperson data, the magnitude of it balances out the outliers. Moreover, community inputs inherent with the social media aspect of this data gathering provides extra oversight.



One of the older forms of participatory science is bird watching, or birding. For centuries, birdwatchers' notes and lists have benefitted ornithologists in their research efforts. Birding observations, especially when they are added into platforms such as eBird, iNaturalist, and other community science hubs, help expand knowledge of bird habitats, population numbers, migration patterns, and more. The Christmas Bird Count, which just closed its 125th year, gets a gold medal for being the longest continuous formal project to involve regular people in data collection. As a 21st-century electronic platform, eBird, is recognized as a "*behemoth citizen science project...and a standard-bearer for the field*" known for its sheer size, ease of use, and data quality. ([Citizen Scientist: Searching for Heroes and Hope in an Age of Extinction](#), by Mary Ellen Hannibal, p. 141).

Birds are the proverbial "canary in a coal mine." Observing and documenting birds is an effective way of protecting the environment. Research shows direct correlation between birds' decline and ecosystem health. If birds are not thriving, it is also the case that biodiversity and the fabric of life are suffering as well.



Participatory science challenges us to grow our knowledge of the natural world while also teaching others. It is an opportunity to engage more people who become scientifically oriented which is quickly becoming vital in a world of misinformation and purposeful science denial. One gains numerous benefits from volunteering and being in nature, similarly, participation in community science provides engagement and life-long

learning opportunities. Knowing that your fun outdoor activities actually contribute to research and conservation efforts is an added bonus. **Whether alone or in a group, your observations are part of a larger effort and matter**, so please do take a moment and upload them into one or many community science platforms!

Warning: once you become engaged in participatory science, especially if you use platforms such as eBird and iNaturalist, you might just start branching out into other taxa (life forms). The sense of exploration is contagious. Dubious about this claim? Then check out the [live feed map of eBird checklist submissions](#) or the [iNaturalist entry page map](#) in the "explore" function. Perhaps you too will embrace the infinite community that is participatory science.

In this age of the Anthropocene with human-generated climate change, there is an even greater need for an army of community scientists out and about documenting the likely mass extinctions happening on our watch. Because extinction means that the life form is no longer, then the ecosystem it inhabited is changed forever. Getting data now helps inform conservation and research which is imperative otherwise we will be losing important life forms that may be needed to reboot a healthy ecosystem. *“Extinction, I realized, is not just about the death of species. It is about the death of meaning. It is about negation itself. Why, I wondered, don’t more people grapple with the terrible erasure of creativity, fecundity, and loss of just plain old life that mass extinction poses?”* ([Citizen Scientist: Searching for Heroes and Hope in an Age of Extinction](#), by Mary Ellen Hannibal, p. 239)

**One of the oldest slogans of environmentalism is “Think globally, act locally” and participatory science perfectly fits this ideal.** So get out there, say hello to your fellow birds, count butterflies, or smell the flowers (and document them). Embrace the sheer joy of nature, its beauty, its diversity, and its importance to all life on Earth.

One way to get started now is with the Great Backyard Bird Count (GBBC) beginning in two days, from February 14 - 17, 2025. The Cornell Lab has an [information page to help you join the GBBC](#), but if you still desire more details on getting involved, please reach out to us here at Jumpstart Nature and we will be happy to help.

There are innumerable participatory science opportunities out there and you are sure to find something that fits your interest and location. For example, ocean lovers who scuba or snorkel should check out [REEF's volunteer fish survey program](#) worldwide. If you are in Washington state, Point Defiance Zoo & Aquarium has a number of [community science programs](#) (and other zoos or aquariums likely have them as well). Lastly, this article from [Smithsonian magazine highlights challenges animals face from wildfires](#). While the article specifically addresses the recent Los Angeles fires, many of these issues could be extrapolated to other fire locales. More to the point, the article suggests many participatory science projects that need your help and they are not all limited to Los Angeles. It's easy to get started...**science and nature are counting on you.**

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## Quick Connections

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



### **BioRegion Map and Framework:**

confused by terms like biomes, floristic province, ecoregion, and similar? This OneEarth approach "delineates 185 discrete bioregions organized within the world's major biogeographical realms" complete with a great [explanation of their approach](#) and a [fun interactive navigator](#).



While we are talking birds, enjoy these two short articles about birds' [adaptation for](#)



### **Quote we're pondering**

*“If an ecosystem loses one of its native species, we know that we cannot speak of it as itself minus one species. An ecosystem minus one species is a different ecosystem.” - **Wendell Berry***



Cornell Lab published this colorful [free downloadable poster](#) of backyard feeder

[winter weather](#) and how their [feet don't freeze](#). birds.

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*Thank you,*

*Laura Schare, Editor*

*Michael Hawk, Founder*

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### **Jumpstart Nature**

PO Box 53842  
San Jose, California 95153

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