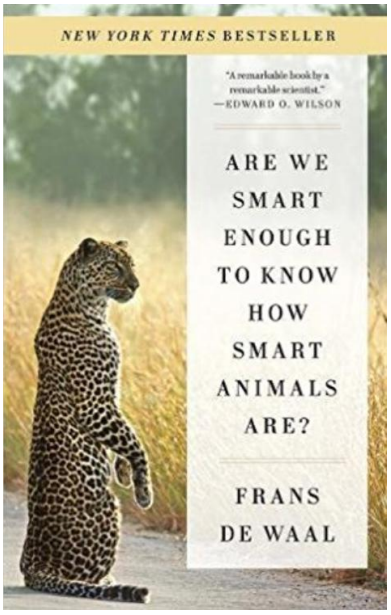
Biodiversity for a Livable Climate

*Restoring Ecosystems to Reverse Global Warming*

# March-April 2018 Newsletter

Greetings!




In 2016 Frans de Waal wrote *Are We Smart Enough to Know How Smart Animals Are*, a review of fascinating research that must give us pause. Such investigations indicate how intelligent the organism some have called Gaia - Planet Earth - collectively is. That's not just about animals either - it's also about fungi, plants and microbes, and how we humans are just one small part of this great symphony of intelligent life. Indigenous cultures have known this forever, the rest of us have some catching up to do.

Fortunately we are finally leaving behind us the scientific curse of "anthropomorphism," the idea that attributing any form of intelligence to non-human creatures was really just a matter of over-using our imaginations.

To celebrate the recently opened doors to the extraordinary lives around us, our November 17-18, 2018 conference in Cambridge, Massachusetts will be "Species Intelligence and the Wisdom of Nature." No web page or tickets sales yet - this is a special heads up for our newsletter subscribers - but be sure to save the date!

You may ask, "What does pan-species intelligence have to do with climate and biodiversity?" In keeping with our striving towards systems thinking I would say "a lot"! Can we let go of our hubris, our belief that we are the chosen ones, and realize that compassion and collaboration, far more than competition, are the essence of life on Earth? if we can, perhaps we will finally become the stewards - and the stewarded - that we were meant to be.

Adam Sacks, Executive Director

Photo: Seth Itzkan

# Walter Jehne on
# New Climate Solutions
# Water Cycles and the Soil Carbon Sponge

**Thursday, April 26, 2018**
**4:00 p.m to 6:00 p.m.**
**Cambridge, MA**

An internationally-recognized Australian climate scientist and soil microbiologist, Walter Jehne was one of the early researchers on glomalin, mycorrhizal fungi, and root ecology. He will describe how quickly, affordably and naturally we can reverse global warming and its effects by working with the water cycle and the soil sponge.

Walter worked for three decades at CSIRO – the Australian government's scientific research organization - with the UN and with NGOs to create global change in food systems and climate response.

Walter is a leader in the grassroots movement to educate farmers, industry and policymakers on the crucial role of soil ecosystems in global climate change. In 2017, he was part of an invitation-only UN FAO conference in Paris looking at bringing soil into the next Intergovernmental Panel on Climate Change (IPCC) report.

***Click here for more information.***

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Woody Tasch's latest book, *Soil 2017*, is a deeply satisfying collection of poetry, science, practical leanings, history, politics, philosophy and whatever else may pop into your mindfulness as you stroll through its pages.

Tasch is a systems thinker of the third kind, a friendly alien plopped onto planet Earth with a mission to show us how good life could be in the 21st century, and to hold our hands on the path to a once-again beautiful world we can live in.
". . . We need to rediscover imagination . . . Imagination that enables us to reckon our whereabouts in a world that is heating up and speeding up. Imagination that enables us to find our way past shallow punditry, tribal vitriol, global this and cyber that, past the hyper and the ultra and the mega. Imagination that leads us back to one another, to the places where we live, and to the land - not just the land of '*this land is your land, this land is our land,'* but also the soil itself, upon which all life depends." (p. 21)

And . . .

"Salmon return. Boomerangs return. Hindus return. When things work out, investments return. Letters with insufficient postage return. So do infections, mosquitos, prodigal sons, wandering eyes, sideways glances, the hands of a clock, circular reasons, not-quite-infinite seasons, pendulums, memories, criminals to the scenes of their crimes and stories to where they left off . . .

Through it all, however, through all these physical, spiritual, emotional, postal, historical, mythical, electoral, recreational, and commercial goings and comings, there is one thing, in our infinite, industrial wisdom and pioneering spirit, that we haven't returned.

Carbon." (p. 31)

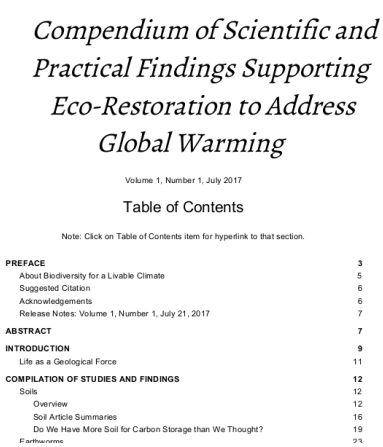
And finally . . .


"Poetry may be the only thing strong enough to blast barnacles off the hull of 20th century economic thinking. Poetry is an antidote to It's the Economy, Stupid. It's biodiesel for tired old mental tractors. It's mobile chicken coops for the McNugget-minded. Poetry is the opposite of warring sound bites, disclaimers, legalese, appendices, indices, punditries, fiduciaryese, demagogueries, pretrans-action niceties, ceo and investment banker salaries, insect-size computerized flying pollinating machineries that are touted as the bee's knees, and manufactured cheese product pretending to be cheese. . . . the road to cultural healing is paved not only with compelling ideological arguments and earnest manifestos, but also with playful musings, quirky quasidivinities, and organic beets." (p. 118)

In this age of the dire, Slow Woody reminds us that soils are really about everything that matters in life, all connected to all else. He reminds us that along with a tsunami of disaster books, pleasure, delight and uplift still belong on our bookshelves.

# And . . .

Check out the latest issue (No. 2!) of our *Compendium of Scientific and Practical Findings Supporting Eco-Restoration to Reverse Global Warming*. This time around we focus on biodiversity and regenerative agriculture, exploring the growing options for addressing climate, supported by experiences of land managers and scientific research from around the world. We take important literature scattered across disciplines and work to bring it together into a useful, coherent and actionable whole.



*Compendium of Scientific and Practical Findings Supporting Eco-Restoration to Address Global Warming*

Volume 1, Number 1, July 2017

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Here's our summary of a ground-breaking article published in 2017 in the journal *Nature*. [Compendium Vol. 1 No. 2 (pp. 9-10)]:

**Biodiversity effects in the wild are common and as strong as key drivers of productivity, Duffy 2017**

“Biodiversity has a major role in sustaining the productivity of Earth’s ecosystems.”

This is the conclusion drawn from an analysis of 133 estimates reported in 67 field studies on the effects of species richness (number of species) on biomass production, isolating biodiversity as a variable from other factors that affect productivity (nutrient availability and climate). The results validate theoretical predictions and corroborate lab experiments showing that greater biodiversity leads to greater ecosystem production, while also refuting prevailing doubts about the significance, after accounting for other factors, of biodiversity’s effect on productivity.

"Because of the long history of skepticism that species diversity affects productivity of natural ecosystems, the strength and consistency of results presented here were unanticipated. In every case we found the opposite of long-standing views expressed in the ecological literature. Ecosystems with high species richness commonly had higher biomass and productivity in observational field data from a wide range of taxa and ecosystems, including grassland plants, trees, lake phytoplankton and zooplankton, and marine fishes. Observed positive associations of biodiversity with production in nature were stronger when covariates were accounted for, stronger than biodiversity effects documented in controlled experiments, and comparable to or stronger than associations with climate and nutrient availability, which are arguably two of the strongest abiotic drivers of ecosystem structure and functioning, as well as major global change drivers.

"Our results also corroborate findings of a recent synthesis of experimental data reporting that biodiversity effects are comparable in magnitude to major drivers of global change, and extend related conclusions based on observational data from forests and dryland plants to a broad range of ecosystems [Duffy 2017: 263]. Integration of this perspective [on the vital role of biodiversity] into global change policy is increasingly urgent as Earth faces widespread and potentially irreversible losses and invasions of species, which are already changing ecosystems.

Free Compendium download available here.

# Last but not least . . .

We're a small non-profit doing ***BIG*** things. We rely on your support to keep us going!

***Please be sure to . . .***


. . . and a monthly donation is ***especially*** appreciated . . .

## *Many thanks!*

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