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JOHN'S CORNER:

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

by John Ferguson

Evidence continues to mount that we are losing our insect populations from multiple causes. Insects are the main sources of food for many animals from birds to small mammals.

Another study published in the journal *Urban Ecosystems* (2021) from the University of Curtin in Australia, has found that most residential gardens are a poor substitute for native grassland and forests in supporting insects.

Insects from bees to butterflies pollinate our flowers, fruits and vegetables. Insects are essential for life on this planet to exist.

Below is a link to a very good talk on the importance of insects and how they affect the food web by Doug Tallamy, PhD.

[Read More...](#)

Thanks to the recent hard freeze and ice storm, we now have an opportunity to redesign our gardens to be more tolerant of weather extremes, and to support our pollinators. Native plants are an excellent way to do both.

A few great books on the subject are:

Attracting Native Pollinators - The Xerces Society Guide, Forward Dr. Marla Spivak, Storey Publishing, 2011, ISBN: 978-1-60342-695-4

"Bringing Nature Home - How You Can Sustain Wildlife with Native Plants"



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by Douglass W. Tallamy, Timber Press, 2014, Edith Printing,
ISBN-13: 978-0-88192-992-8

"Nature's Best Hope- A New Approach to Conservation That Starts In your Yard"
by Douglass W. Tallamy, Timber Press, 2019, ISBN-13: 978-1-60469-900-5

The microbial world beneath our feet continues to amaze me. A new paper from Lund University in Sweden published in the ISME Journal (2021) was on fungi. The study was on how fungi forage for food, how they explore the soil around them and what strategies they employ.

They discovered that fungi use different strategies to grow their hyphae through the soil and create their mycelium network. Researchers followed the hyphae growth under a microscope and observed some interesting patterns and strategies.

Some fungi they named "the soldier" because it grows with great force and plows down obstacles in its path but does not travel very far (see The Forth phase of Water in Issue #67). Some hyphae they called "the marathon runner" that grow quite far in the search for food, then there was "the snake" a hypha that weaves in and out to move around blockages.

WEEDS and HERBICIDES ROUND-UP UPDATE #5

A new study by an international team of scientists have found that glyphosate-based herbicides like Round Up, disrupt the human gut microbiome. Many of the beneficial bacteria that supports our immune system (especially for virus defense) have what is known as the "shikimate pathway", which is destroyed by exposure to glyphosate.

This explains why people whom eat foods with glyphosate on them, especially GMO's have a much higher rate of Covid-19 health issues and death (MIT University 2020).



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The elements magnesium and zinc are essential for our immune systems to fight off viruses. Glyphosate binds with these elements and prevents them from being absorbed from our food, making one much more susceptible to viruses.

A couple good summaries can be found at:

- 1.- [Stephanie Seneff Discusses Glyphosate and Deuterium](#)
- 2.- [Glyphosate- Interview with Dr. Seneff](#)

Other research has found that glyphosate causes compaction of our soils and a three times higher rates of erosion in our gardens.

Researchers at the University of Savoie Mont Blanc in France (2021) has found that glyphosate causes extremely toxic pesticides like DDT and chlordecone (both banned for decades) that were locked up on soil particles to be released back into food supply and water ways.

To detoxify ourselves, several health newsletters have suggested consuming organic, unpasteurized apple cider vinegar which contains acetobacter which can break down glyphosate. Eating garlic and cruciferous vegetables that are a source of sulfur also helps. Glycine supplementation also helps the body detoxify glyphosate and remove it from our bodies.

The German Center for Integrative Biodiversity Research released a new study of ten thousand people, published in the journal Scientific Reports (2020) on the relation between trees and depression in urban areas. They found that living within 100 yards of trees around one's home was associated with a reduced risk of being prescribed antidepressant medication.