



Direct Observation Microscopy

(Looking Out for the Little Guys)

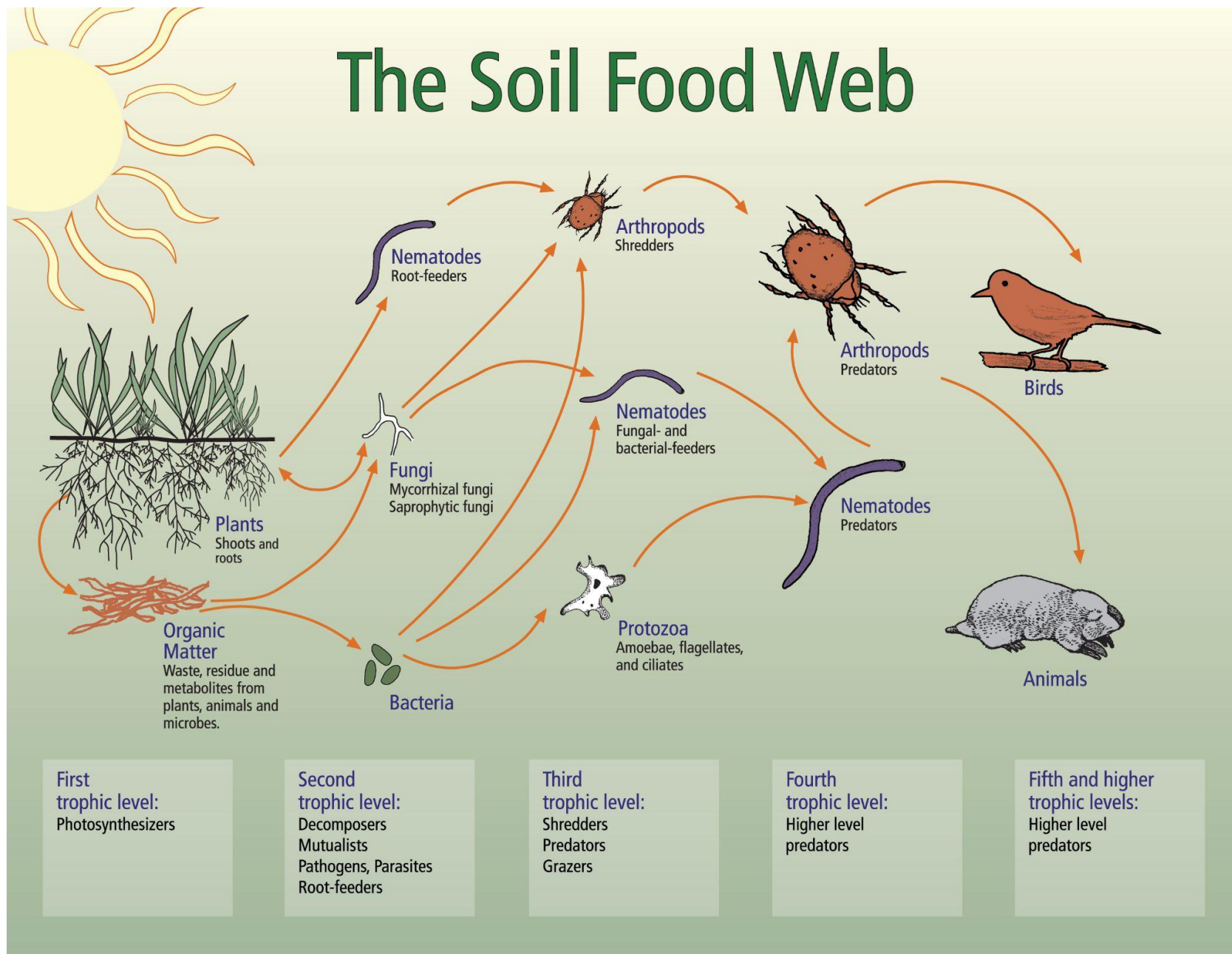
Presented by Lanny Ellis - The Ground Up

TheGroundUpSoil.com



Compost Symposium at the Summit for Recycling – Steamboat Springs, Colorado – May 22-23, 2023

The Soil Food Web



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What is the Soil Food Web?

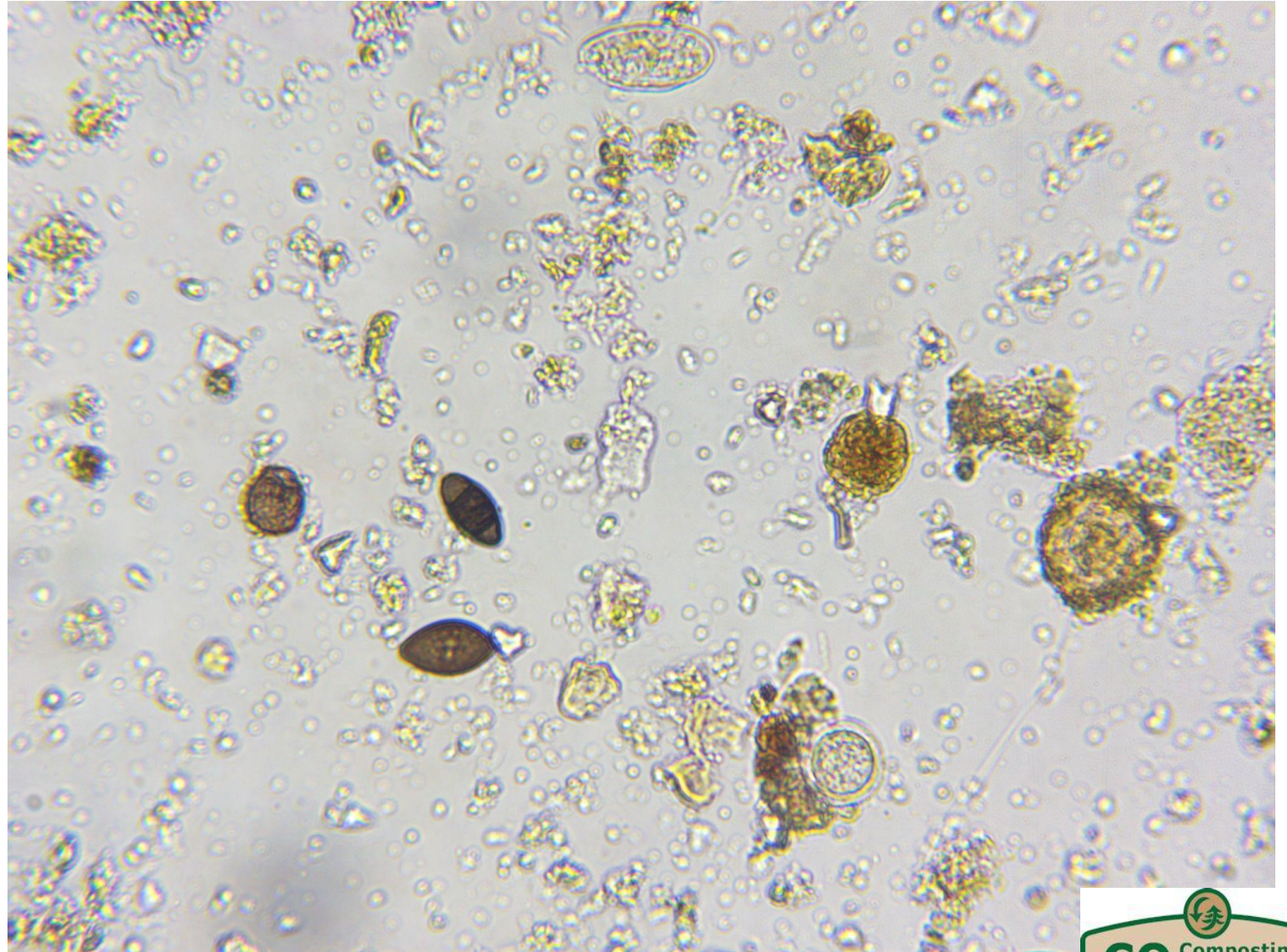
“An incredible diversity of organisms make up the soil food web. They range in size from the tiniest one-celled bacteria, algae, fungi, and protozoa, to the more complex nematodes and micro-arthropods, to the visible earthworms, insects, small vertebrates, and plants.

As these organisms eat, grow, and move through the soil, they make it possible to have clean water, clean air, healthy plants, and moderated water flow.”

Dr. Elaine Ingham

Soil Organisms include...

- Bacteria
- Fungi
- Protozoa
- Nematodes
- Microarthropods
- Macroarthropods
- Worms
- Mammals



Decomposers

- Fungi and Bacteria
- Break down living and dead Organic Matter (Carbon!)
- Build soil **aggregates**

Predators

- Protozoa and Nematodes
- Feed on bacteria, fungi, nematodes. They keep F:B ratios in check
- They **cycle nutrients** within the soil

Why do we want to steward the Soil Food Web?

1. Increased Yields
2. Increased Nutritional Value
3. Protection from Pests and Diseases
4. Reduced Irrigation requirements
5. No need for fertilizers
6. Weed Suppression
7. Protection from erosion
8. Carbon Sequestration.... And more!



How do we identify microbes?

Morphology

How does it look?



Mobility

How does it move?



Thank you

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