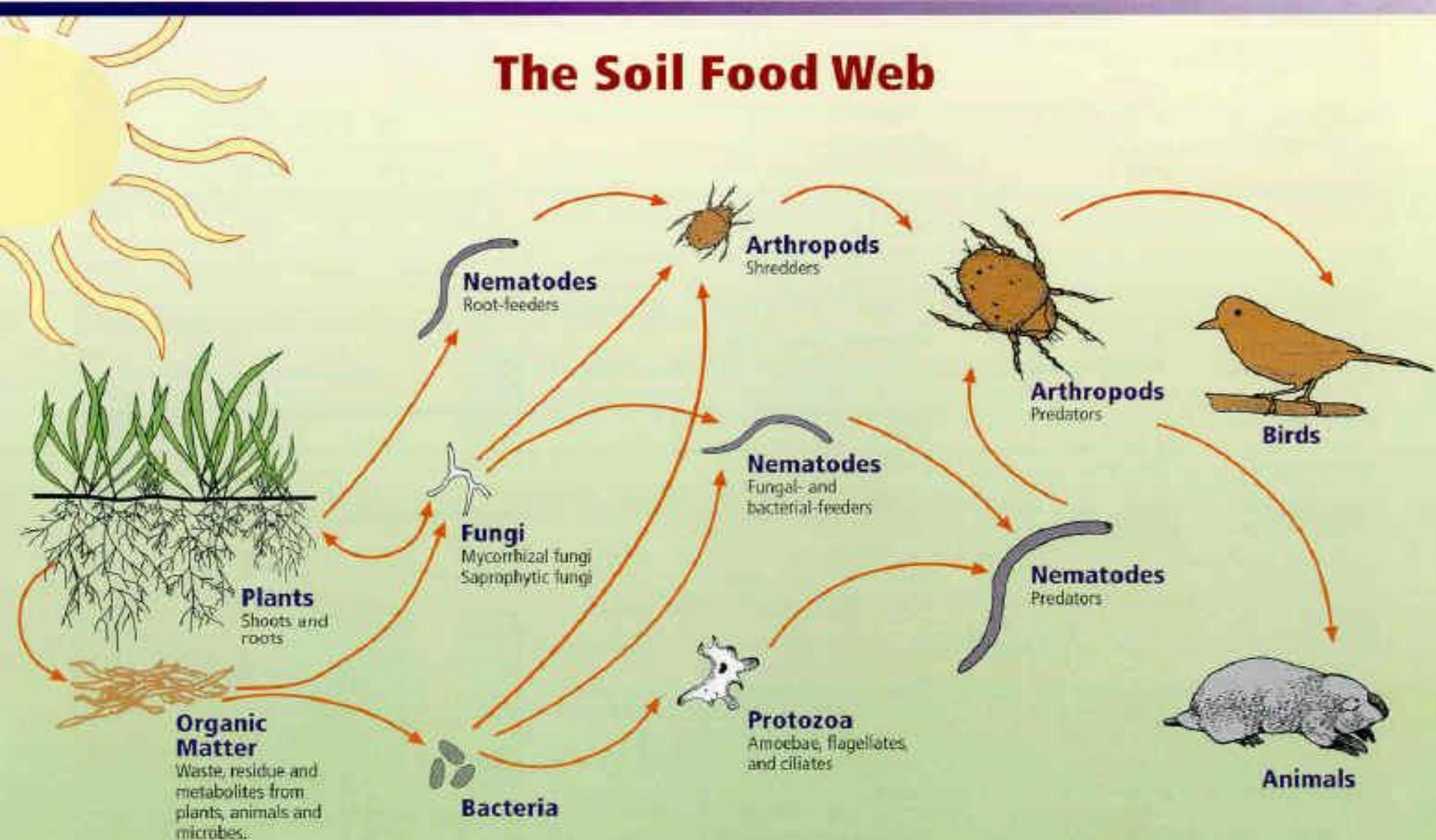


The Soil Food Web



First trophic level:
Photosynthesizers

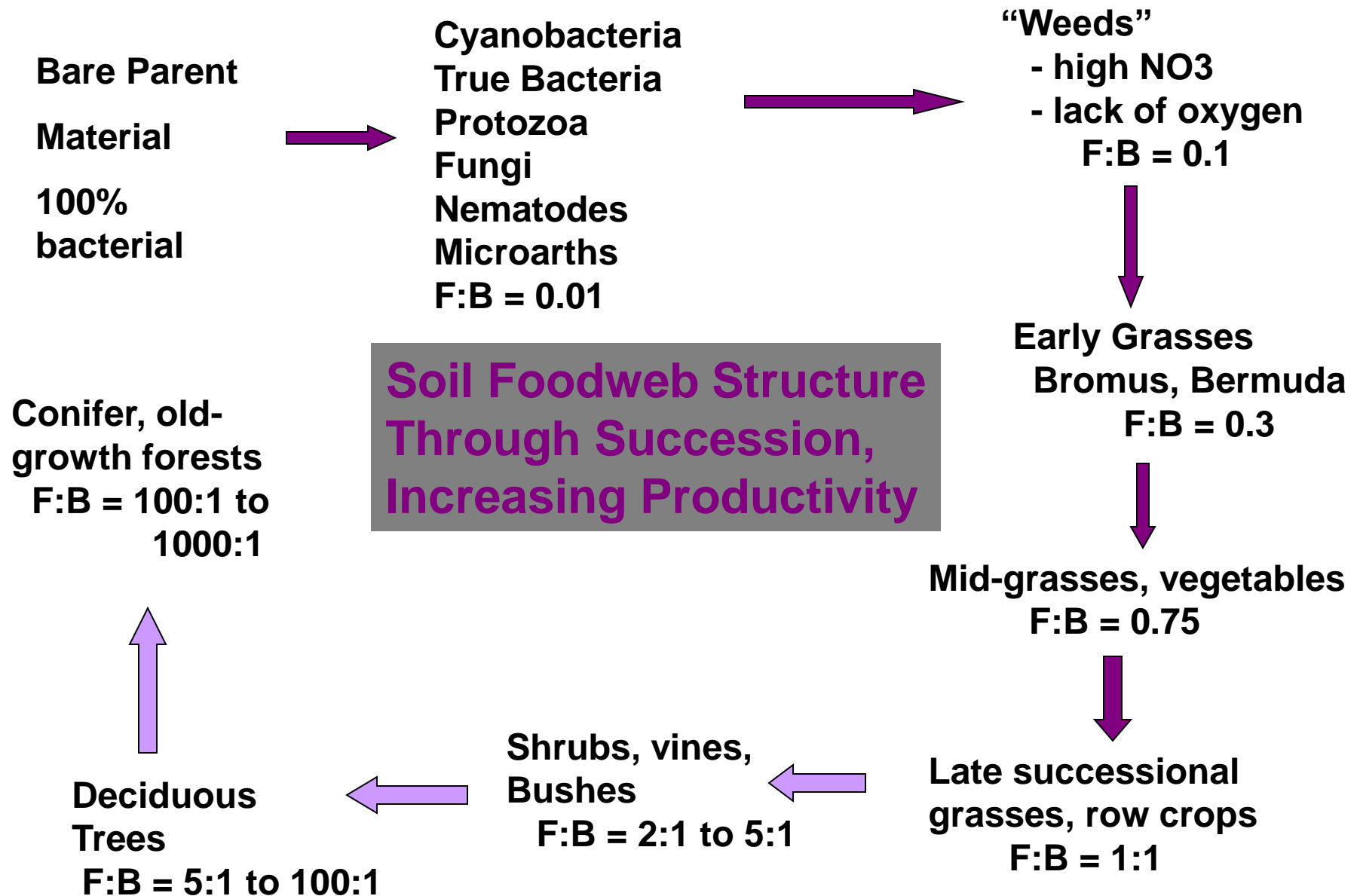
Second trophic level:
Decomposers
Mutualists
Pathogens, parasites
Root-feeders

Third trophic level:
Shredders
Predators
Grazers

Fourth trophic level:
Higher level predators

Fifth and higher trophic levels:
Higher level predators

What does your plant need?



Soil biological succession causes plant succession



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Bacteria ...A few Fungi.....BalancedMore Fungi..... Fungi

Bacteria: 10 µg	100 µg	500	600 µg	500 µg	700 µg
Fungi: 0 µg	10 µg	250	600 µg	800 µg	7000 µg

Forms of nutrients: Critical to understand



limited NO_3 balanced NH_4

cycling NO_3 and NH_4

Protozoa.....B-f.....F-f.....Predatory.....Microarthropods

nematodes

Volcano!

**Bare Parent
Material
100%
bacterial**



**Foodweb
Development
F:B = 0.01**



**“Weeds”
F:B 0.1**



**Early Annuals
F:B = 0.3**



**Mid-grass, vegies
F:B = 0.75**



**Pasture, row crops
F:B = 1:1**



Cattle

**Disturbance Pushes
Systems “Backwards”,
But How Far?
Depends on Intensity,
Frequency**

Insects



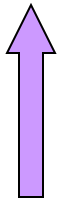
FIRE!!!



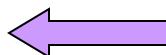
Flood



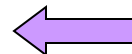
**Old- growth
F:B = 100:1 to
1000:1**



**Deciduous Trees
F:B = 5:1 to 100:1**



**Bushes
F:B = 2:1 to 5:1**



Humans?