Do real ecosystems fit the predictions?

① $\alpha = \frac{P+I}{N}$

$\alpha < 2$ for C
$\alpha < 1$ for Rh. zospiters } always fit

Must be careful to
① determine at what depth nutrient levels taken

Group Selection model
Ecological
Units
Levels

② when two organisms are linked & one is both competing with and mutualistically dependent upon the other - that organism may reach an optimum at group selection "type" levels.

microbes

In a microbial mat

11-19-91

John Harte:

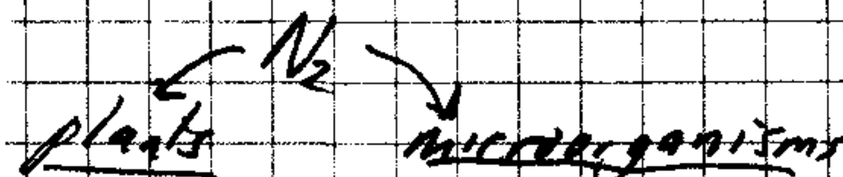
Plants & Microorganisms

- competetion for other N
- mutualism

CO_2 → plants → microorganism

N_2 → microorg → plants

- Is there an optimum where



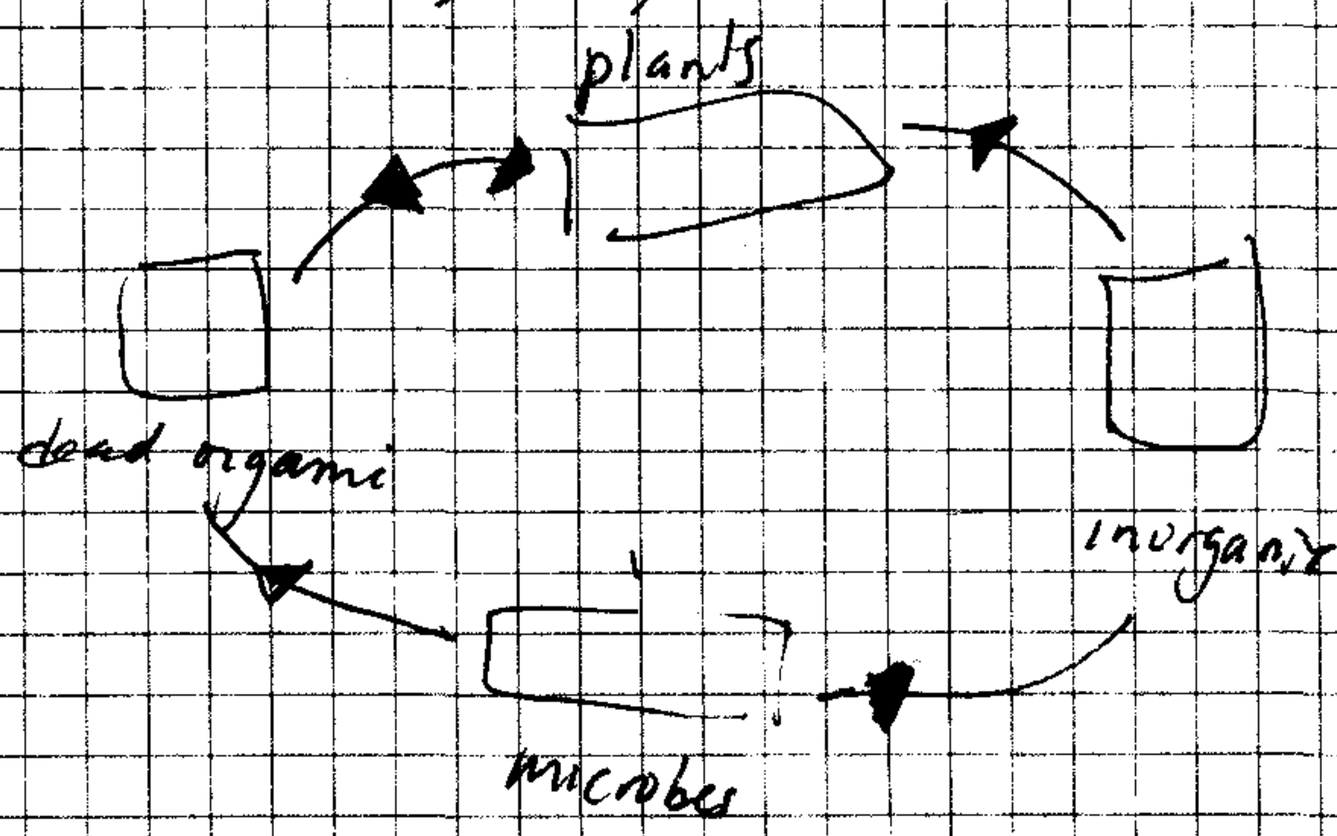
- Microbe maximizing strategy (MMS)
  - assumes microbes allocate N for maximizing population size

No cycles

- if microbes considered alive then their growth rate is dependent on their mass

Nutrient cycles

- Are they general patterns in stocks and flows of nutrients in soil systems?



- Make predictions based on
  - Create limiting steps (N_2 vs. C)