Population dynamics

Evolution & Ecology

Jacopo Grilli, Ciudad de Guatemala, 28/11/2025
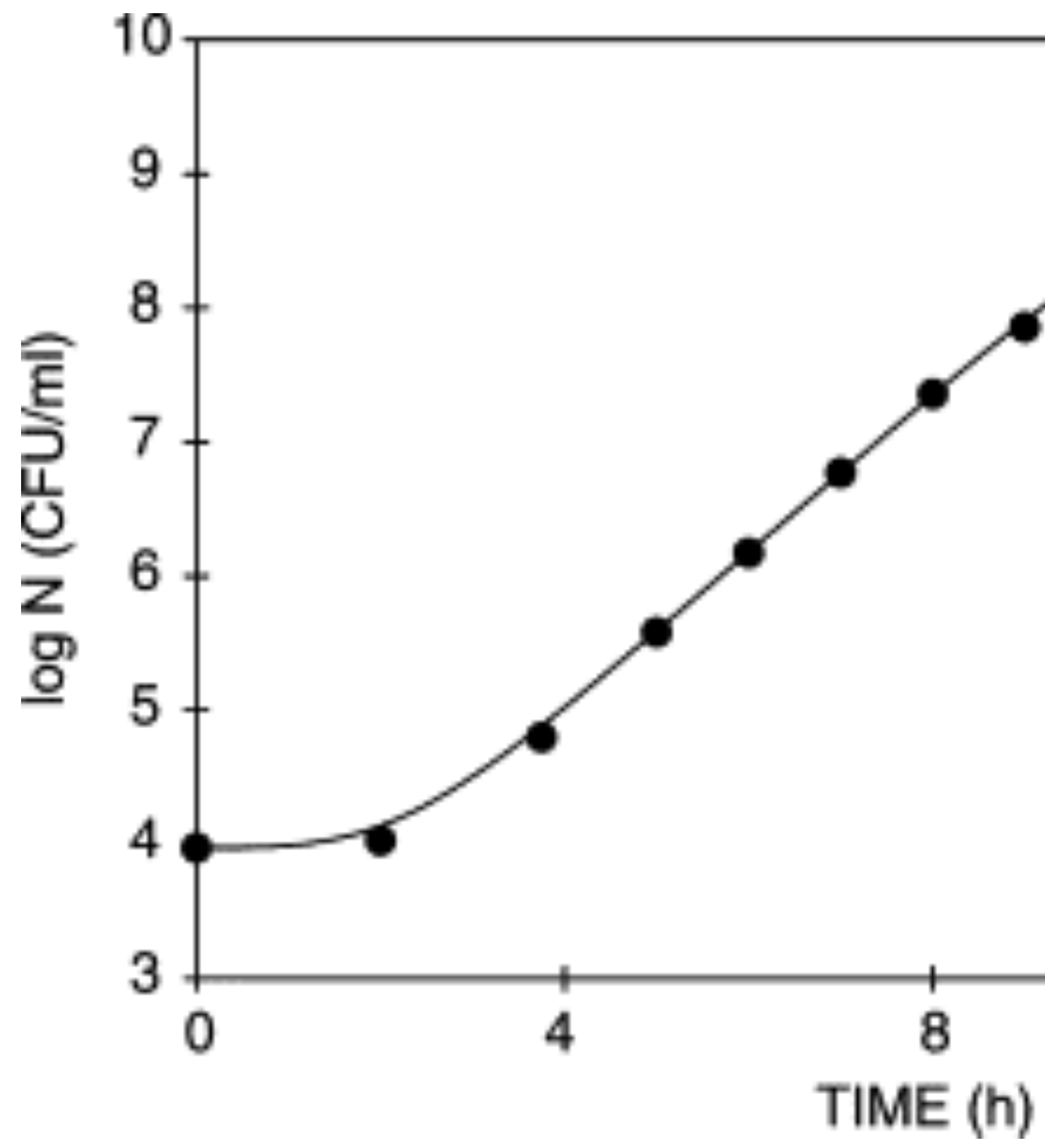
Plan

L1 - ~~Exponential growth~~

~~L2 - Mutations~~
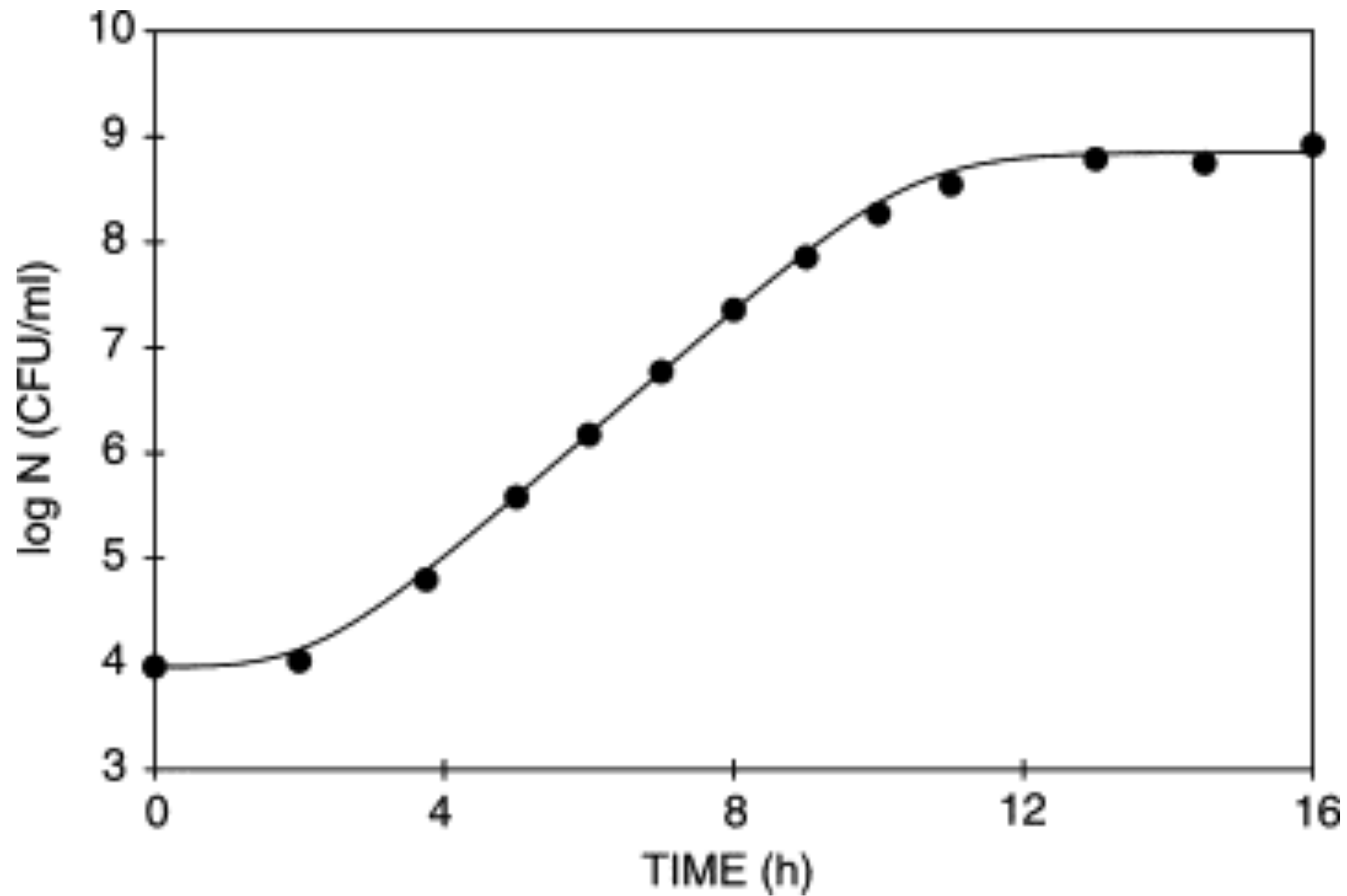
~~L3 - Selection~~

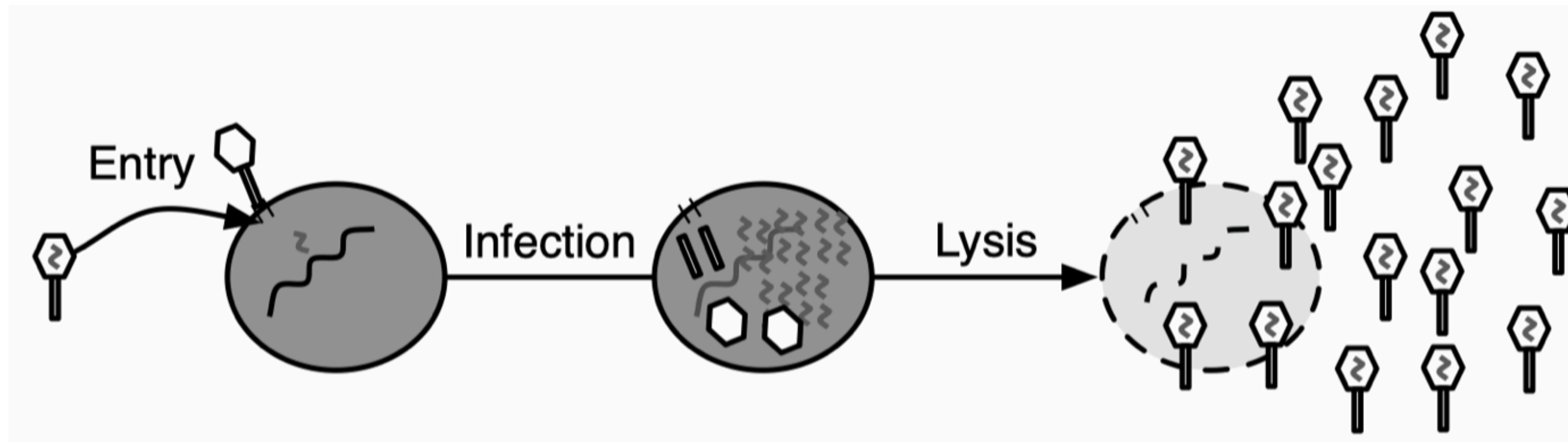L4 - Population dynamics

L5 - Eco-Evo

Exponential

Exponential is not forever

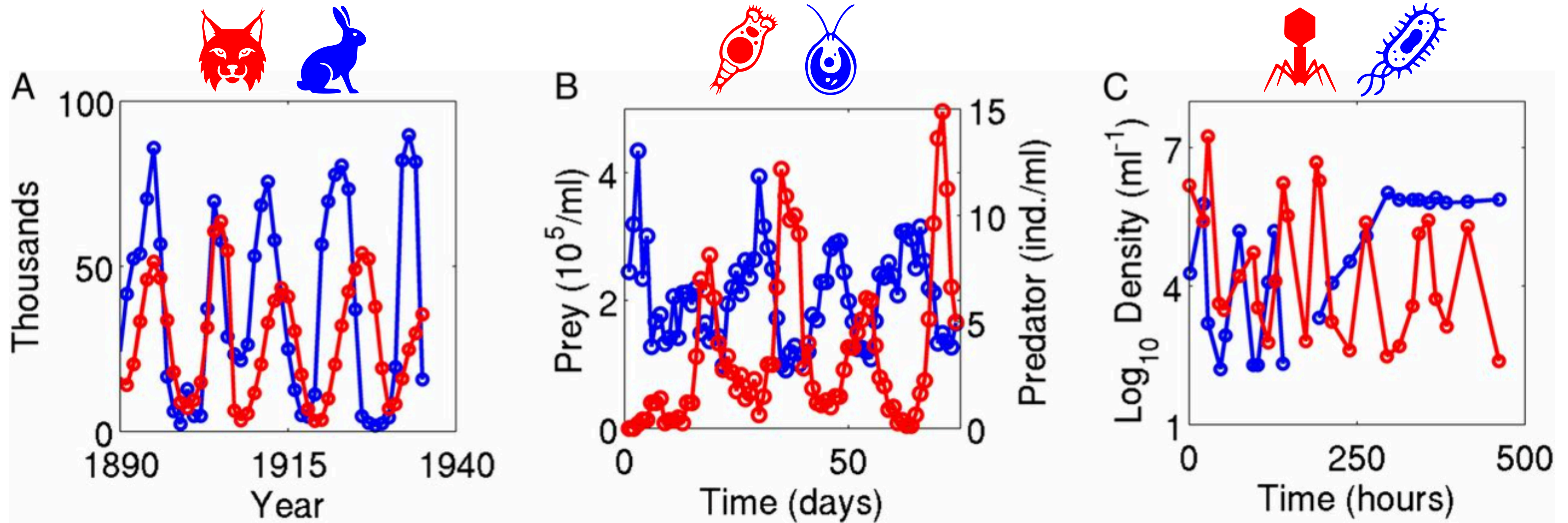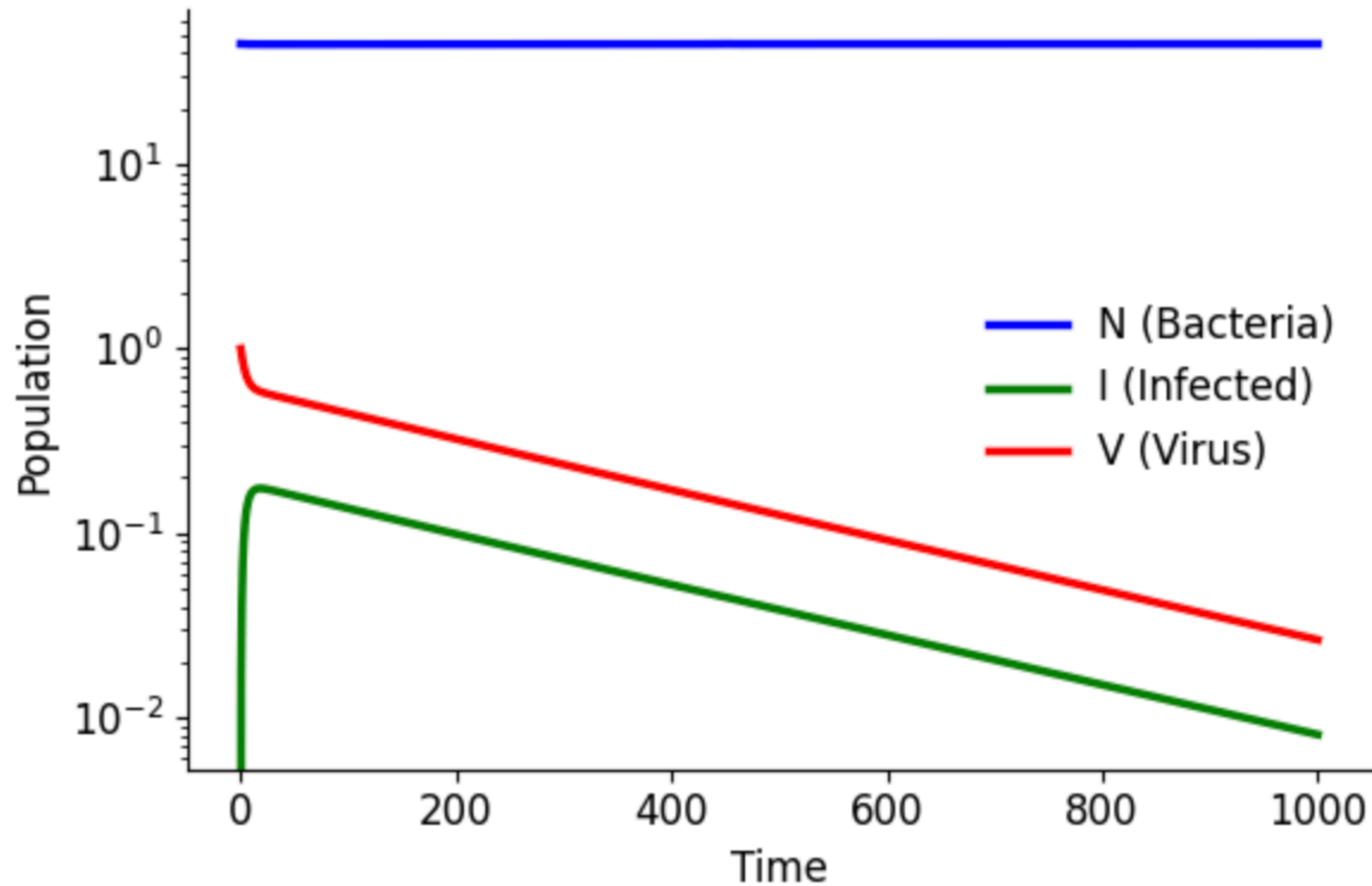# Limits to growth
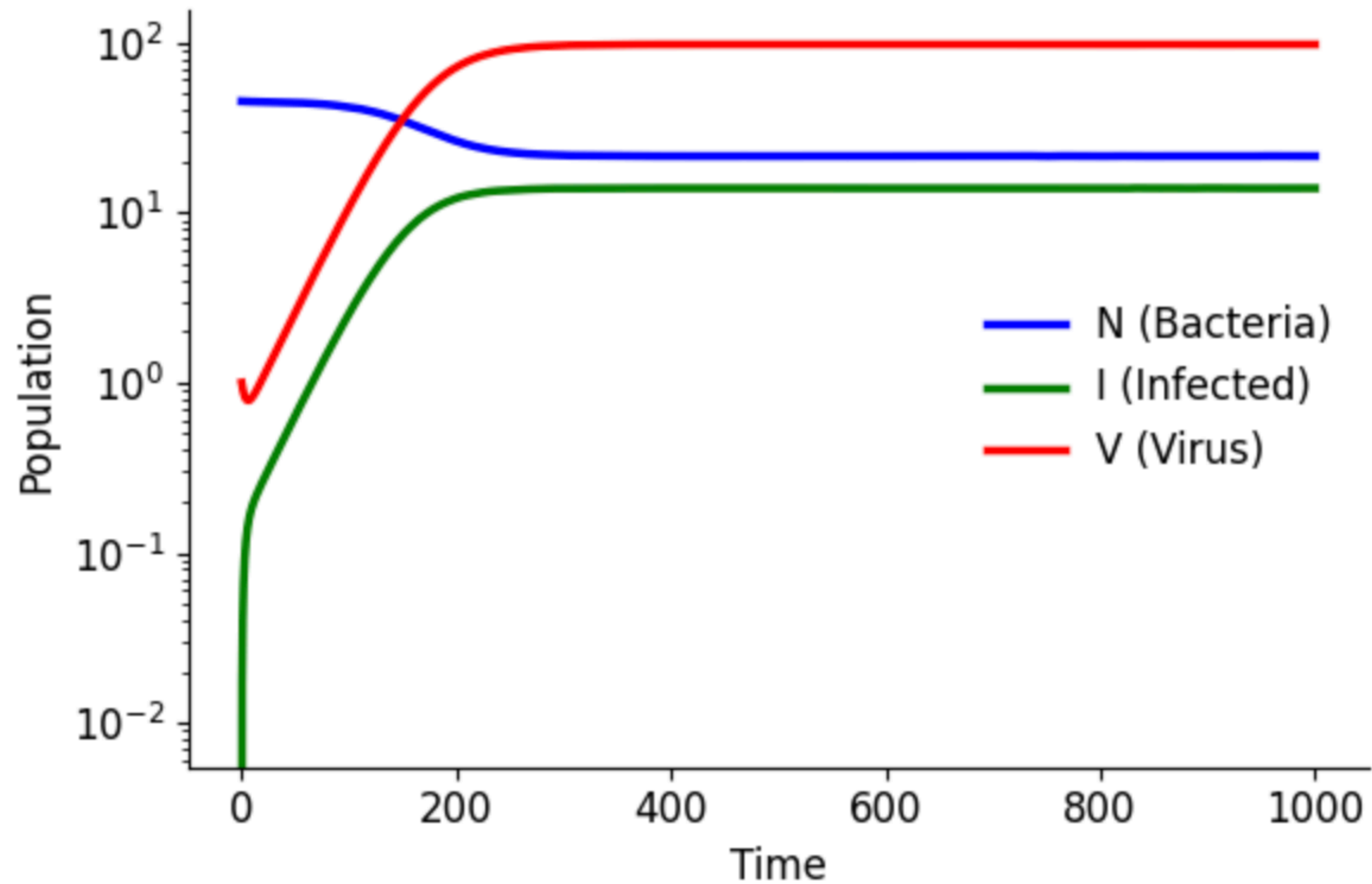
Bacteria and phages

Cycles in ecological dynamics

Let's build an ecological model

Scenario 1. No phages (small β)

Scenario 2. Fixed point (intermediate β)

Scenario 3. Oscillations (large β)