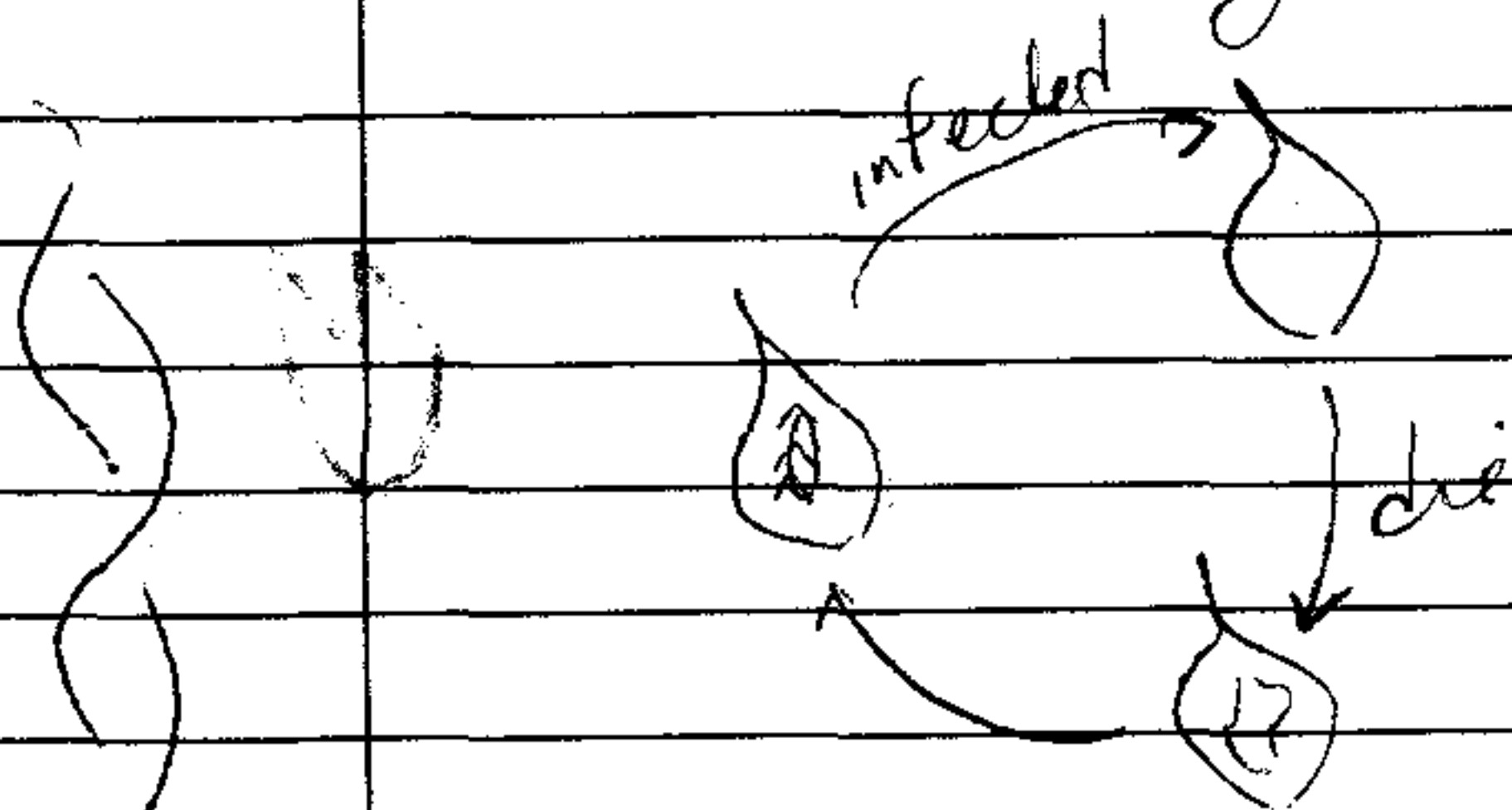


GREG DWYER

Nuclear Polyhedrosis Virus - NPV

- form v. large occlusion bodies



- community - v. little
- direct transmission
- almost always lethal
- 1 strain

Transmission

- traditionally - use v. PV = de, - fly & constant

Reaction-Diffusion Model

Evolution of Virulence

Different Strains

- killing time ...

what about differences on host movement?

Insect Population Dynamics

- Population density changes are over many orders of magnitude

What drives cycles?

- ① environmental fluctuations
- ② endogenous cycles

MODELING

- not great way to go

So... Look @ POSSIBILITIES & TEST THEM

- ① insect quality decr. w/ incr. density
- ② induced defense (e.g. of trees)
higher @ high density
- ③ host-parasitoid
- parasitoid kills parasite
- ④ host-pathogen

HOW TEST?

$$\frac{dN}{dt} = rN \left(\frac{N - K}{K} \right)$$