

- Competing system

Type of non-trivial Equilibrium

- sink node \Rightarrow Both species exist

- Saddle node \Rightarrow At least one species exists.

$\begin{cases} \text{In most cases, the other goes extinct.} \\ \text{In some cases, both exist} \end{cases}$

- Prey-Predator (Infinite food)

Type of non-trivial Equilibrium

- Can only be center \Rightarrow Both species exist & oscillate

- Prey-Predator (finite food)

Type of non-trivial Equilibrium

- sink spiral \Rightarrow species coexist & converges to Equilibrium

- sink node \Rightarrow species coexist & converges to Equilibrium