

Volterra (1926)

1. Why the focus on Laws?
2. Volterra is clearly focusing here (after previous one-species work) on predator-prey systems. Was ecology already that advanced in 1926?
3. What assumptions accompany these linked population cycles?

Birch (1954)

4. 28 years later, Birch was still unraveling single species math. Given [Lotka &] Volterra in the 1920s, why this slow progress in ecology, entomology, etc.?
5. Is r a selected trait?
6. Do populations actually have stable age distributions?
7. Does anyone actually use all this (r , R_0 , T , l_x , m_x , λ , etc.) for ecological research anymore? Can't we just use machine learning to predict populations?

Cole (1954)

8. Cole tries to join life history biology to population math. Does he bridge the math / field split?
9. p. 128 explains crude birth rate (BR) conflate births AND longevity. So what census data *should* we focus on?
10. If age at first reproduction is essential, why do we instead emphasize crude birth rate? Or mean age of childbearing?
11. Cole advocates for comparative life history studies. *Oh great*. Do all this number crunching for multiple populations or species. To what end? So what?
12. Why are semelparous organisms not iteroparous or vice versa?