

Title: Competition for a single nutrient with internal storage in a two-vessel gradostat

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Abstract:

The traditional competition model usually assumes that consumption of nutrients and growth of populations are directly proportional though a quota constant. However, it was known that the nutrient quota per individual may vary dynamically, so that nutrient can be stored internally within individual species. On the other hand, the mechanism of quota variation in spatially variable habitats is also an important topic in theoretical work since species can use the stored nutrient to survive when individuals travel to a poor region. In this talk, I will propose a two-vessel gradostat system to investigate the competition with internal storage along a nutrient gradient. This is a joint work with Dr. Sze-Bi Hsu.