

The Age Structure of Population-Dependent General Branching Processes in Environments with A High Carrying Capacity

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The age structure of populations supercritical below and subcritical above a carrying capacity is investigated, the result being a law of large numbers, as the capacity increases and time passes, provided the starting population is not little. The limit is identified and shown to satisfy a weak version of the Von Foerster partial differential equation.

Key Words: Age-dependent branching process, law of large numbers, carrying capacity, Von Foerster equation.