

Abstract

Species range size is collection of all regions which the specie occupies. Every specie has different range size, the most widespread are marine species. Range size distribution is log-normal, which means that the most of species have narrow ranges, some are widespread, and a few have extremely small ranges. This distribution can be a result of speciation and extinction. Speciation adds new species, which inhabits a part of original range. It causes a reduction of original range. Old species, which are getting closer to their extinction, are also declining their range together with abundance. One of the interesting theories is the stochastic theory, it is based on stochastic differential equation. This equation describes a changes of range size towards its equilibrium, which is the value when the range size is in steady state. The next factor is abundance. It is known that species with more individuals occupy larger ranges. Abundance distribution is also log-normal. In this thesis, I would try to summarize theories which explains why the most of species have small range sizes and how range vary among similar species.