

Unevenness in the distribution of species diversity on the surface of the earth is one of the most striking phenomena in ecology. Latitudinal gradient of biodiversity could be explained by different rates of evolutionary processes such as speciation and ecological processes that control the rate of extinction. The goal is to collect and evaluate the literature on the temperature dependence or latitudinal trends in the rates of these processes. Metabolic theory of biodiversity serves as the best explanation of the rates of evolutionary processes and their dependence on temperature, while an explanation of the rate of ecological process is lacking in empirical data and theories that would put them in relation to temperature and latitude. Explanation by More individual hypothesis was proved unconvincing.