

# REFLECTIONS ON VICTOR GORSHKOV & ANASTASIYA MAKARIEVA WORK "KEY ECOLOGICAL PARAMETERS OF IMMOTILE VERSUS LOCOMOTIVE LIFE"

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**Abstract.** The modern biology widely uses methods of exact Sciences and, in particular, physics. However, physics and biology study objects with very different levels of integration of matter. This difference determines the fundamental differences in the nature of the studied objects and methods of obtaining knowledge. The indelicate application of methods previously used to describe inanimate nature, in fact, led to a split in the scientific community that studies life, to a lack of understanding and, often, even rejection of the results obtained by colleagues. As a result, mathematical modeling and theoretical generalizations of biological phenomena have not been properly developed. Currently, theoretical biology made a comeback, but for now it has to disguise itself as bioinformatics, transcriptomics, proteomics, metabolomics, systems biology, and so on. This note examines the historical background of the current situation and highlights its main, in our opinion, causes on the example of specific work related to ecosystem modeling.

**Keywords:** biological processes modeling, problems of mathematical modeling in biology, the interaction of physics and biology.