

IMPACT OF THE WORKS OF V. G. GORSHKOV ON THE DEVELOPMENT OF MATHEMATICAL MODELS OF ECOSYSTEMS

N. V. Belotelov

FIC IM CC RAS named by A. A. Dorodnicyn, 40 Vavilova street, Moscow, 119333, Russia

E-mail: belotel@mail.ru

Abstract. This paper discusses the latest article by V. G. Gorshkov and A. M. Makarieva *Fundamental ecological parameters of stationary and moving life*. The main theoretical results obtained by V. G. Gorshkov over the past 40 years are reviewed. The problem of combining population and mass energy approaches in ecosystem modeling is analyzed. It is suggested that in the course of study of ecological systems, it is necessary to make use of the methodological developments of modern physics, and at the same time systematically and carefully coordinate the conceptual framework developed in physics and biology using the language of mathematical modeling.

Keywords: mathematical modeling, population models, biogenic element cycle models, size spectrum.

Acknowledgments. The work was carried out with the support of RFFI (project No. 19-010-00423).