Role of chaos in the maintenance of ecosystem stability. Computer modeling.

T. Stoyanova
National University, Kharkov, Ukraine

Concept of stability is one of the basic concepts of the evolution theory. Stability of the whole system is provided with the presence of buffer zones that are characterized with the structure disorder and the presence of chaos in their behavior. Due to the presence of such zones, the system works as the information machine. At different levels of the geospace organization the role of buffer zones is carried out with different formations. But their common function is the recognition of external signals. Buffer zones are especially precisely shown on border of system. Less expressed formations are in internal parts. In biocenosis, for example, it leads to the occurrence of mosaic structure of vegetation. Such phenomena can be simulated on the basis of cellular automata. It is suitable environment for modeling spatially distributed systems.