Mass extinctions on the Earth in the past and hereafter: combined use of the progress in paleontology, cosmology, science on food, and engineering for their explanation and forecasting of the impending dangers and the ways of minimization of their harmful effect

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Abstract

The Earth's species diversity from unicells to mammalians depends not only on the time-scale but also on the natural conditions critically varying repeatedly over the Earth's history as a result of alternation of the periods favorable for flora and fauna development and periods of global or regional damaging natural phenomena of the terrestrial, solar, or cosmic origin. During the last 542 My, in the most devastating extinction, 80-90% of Earth's species disappeared and, in two most widely-known extinctions, dinosaurs and mammoths and many other plant and animal species were destroyed. The events, which had occurred repeatedly in the past, will surely happen hereafter, because no principal changes happened in nature. Basing on the PFO-CFO Theory of Solar System Formation and Transformations developed by us step by step in the last decade [1-3], we give a common explanation for these catastrophic phenomena [4, 5], predict the natural events that will precede the arrangement of conditions fraught with harmful consequences hereafter, and consider here the necessary prior scientific and engineering activities capable of minimizing the devastating effect of the next dangerous natural event.

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