

Готовится к выпуску

WERE THE MAMMOTHS KILLED BY THE WARMING ? (Testing of the climatic versions of Wurm extinctions) / Putshkov P. V. — Vestnik zoologii. — 1997. — Suppl. N 4. — 76 p. — Bibl. 293 (in print)

The climatic explanations of Wurm megafaunal extinctions without replacement (MEWR) are inconsistent with the bulk of neo- and paleoecological evidence. The extinct giant herbivores (GH) were highly euryoecious forms, that lived under wide range of climates and landscapes. For example, woolly mammoths and rhinos certainly lived not only under extremely cold conditions of periglacial tundra-steppes, but also under far milder conditions. They subsisted on a wide range of vegetation types and could cope with the deep snow and the frozen snow crust better than any of living ungulates. No climatic extinctions doctrine could explain the absence of MEWR



during numerous pre-Wurm deglaciation events. Such explanation is easy for the panbiotic doctrine that pays due attention to biotic interactions in Pleistocene and Holocene ecosystems. The 'Prehistoric pastures' were highly favorable to large herbivores owing to the biotic reasons and not due to the climatic ones. GH acted as peculiar 'mega-gardeners'. Their feeding, trampling, seed-planting, soil-fertilizing and other activities created highly productive and highly mosaic plant-communities. Due to GH zoogenic open woodlands, parklands and

savannas occupied vast regions, climatically fit for closed forests, bushlands or, on the contrary — for completely treeless open grasslands. Woolly mammoths and rhinos exerted the strong effects not only on vegetation, but on the snow cover as well. The effects of GH were favorable for the majority of smaller (20–1000 kg) megafaunal species (SMS). The other decisive component of the 'Prehistoric Equilibrium' were the largest predators (LP). They regulated the density of GH, other herbivores and subdominant predators, including the hominids. Thus the LP maintained the ecosystems diversity. During the most of the Anthropogene the combined stabilizing action of GH and LP prevented the MEWR in spite of the numerous climate-induced stresses. Only the man has triggered the crisis, being liberated from the large carnivores control. Human hunters removed GH from the ecosystems partially (Paleotropis) or completely. This removal caused environmental changes and numerous secondary extinctions of SMS. The different secondary extinctions range in various parts of the world was the outcome of various additional reasons, that also were mostly of the biotic nature. So, contrary to the classic **overkill** concept, the panbiotic one states that only the GH weighing more than 1 ton were overhunted. The 'key-herbivores removal' idea is an obligatory but not unique element of the panbiotic concept. The interactions of the man and hominids with the LP also played an outstanding role in the run of the Pleistocene crisis. The same is true for the evolutionary changeable aptitude of animals to adapt to both direct and indirect anthropic, biotic and climatic effects.

ПОГУБИЛО ЛИ МАМОНТОВ ПОТЕПЛЕНИЕ ? (анализ климатических версий вюрмских вымираний) / Пучков П. В. — Вестн. зоологии. — 1997. — Отд. выпуск № 4. — 76 с. — Bibl. 293 назв. (в печати)

Показана несостоятельность климатических версий вюрмских вымираний. Обоснована необходимость их замены панбиотической версией, всесторонне учитывающей важнейшие биотические взаимодействия в плейстоцене. В первую очередь это средообразующие эффекты гигантских фитофагов и крупнейших хищников, а также разрушительное воздействие людей на эти звенья. Очень важна и изменчивая во времени способность представителей мегафауны противостоять антропоическим, биотическим и климатическим воздействиям. Названные и другие вопросы применительно к мамонтовым экосистемам рассмотрены в работе подробно. Применительно к другим экосистемам они рассмотрены кратко.