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The Quaternary faunas and climatic fluctuation in the tropical zone of China

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About 70 examples of Quaternary fauna in China's tropics are enumerated in this paper. Of which about 40% of the examples can be found even in cooling stages, showing the smaller amplitude of climatic fluctuation during Quaternary. According to the temporal and spatial distribution of tropical faunas, the following characters of climate variation can be evidenced: two main cycles in Early Pleistocene, three main cycles in Middle Pleistocene, two main cycles in Late Pleistocene and Holocene Megathermal. The drop in temperature during the Latest Glacial Period and Neoglaciation has not endangered the existence of tropical faunas. With influence of cooling fluctuation during historical period, some faunas have removed southwards progressively, but disappearance of these animals in China's tropics was mainly the result of artificial factors.

The Quaternary faunas and climatic fluctuation in the tropical zone of China HUANG Zhenguo¹, ZHANG Wei qiang² (1. Guangzhou Institute of Geography, Guangzhou 510070, China; 2. Guangdong Business College, Guangzhou 510320, China) In China's tropics the fauna of Ailuropoda-Stegodon appeared even in the beginning of Pleistocene. Afterwards due to the change of climate, these mammalia faunas of herbivorous animal had only a small number at the end of Late Pleistocene. The surviving animals experienced ecological variation. The special representations of this fauna are as follows: Ailuropoda, Stegodon orientalis, Myalapirus, Rhinoceros sinensis, Pongo pygmaeus and others. The Ailuropoda-Stegodon fauna is quite similar to the contemporary faunas of Indo-Malaysia; the representative animals of the latter are Stegodon, Tapiirus, Rhinoceros sinensis, Pongo pygmaeus, Elephas maximus and Crocuta ulfima. It is clear that the Ailuropoda-Stegodon fauna shows the tropical natural environment. In the light of ecological environment the common faunas of Quaternary in China's tropics can be divided into two types, the forest animal and grassland animal. The former includes Ailuropoda, Stegodon, Elephas, Rhinoceros, Pongo pygmaeus, Myalapirus, Tapiirus, Macaca, Prebytis, Hyllobates, Panthera tigris, Panthera pardus, Sus scrofa, Hystrix etc., representing the hot and humid environment. The latter includes Rusa unicolor, Bubalus, Bison, Gazella, Cervus temminck, Crocuta ulfima, Muntiacus, Pseudaxis etc., representing the cooler climate. This paper attempts to discuss the climate fluctuation reflected by tropical faunas based on the environmental mark mentioned above. 1 The two main cycles of climate fluctuation during Early Pleistocene 2 The three main cycles of climate fluctuation during Middle Pleistocene 3 The sharp fluctuation of climate during Late Pleistocene 4 The climate fluctuation during Holocene 4.1 The Latest Deglacial Period and warming return period 4.2 The Megathermal of Holocene 5 Climatic variation during the historical times 6 Conclusions

关键词: faunas; climate; China's tropics

