

Preface

The Great American Biotic Interchange (GABI) between North and South America is one of the most important events in the history of land mammals. The first authors that considered the interchange between the Americas were Wallace, Ameghino, and few others as early as the second half of the nineteenth century. Notwithstanding that a huge effort was made by thousands of paleontologists, zoologists, botanists, geologists, and professionals of other disciplines, we are far from having a precise panorama about one of the most important events in the history of mammals.

However, we are confident that a more complete survey of mammal bearing units in southern South America as well as discovering others in the central and northern Andes and Central America will give us the factual evidence for proposing, confirming, or rejecting many hypotheses. Moreover, the expanding molecular studies will provide the minimum age for the origin of many endemic clades of North American families whose first appearance is not adequately explained.

In this book, we consider the extinction of megafauna in South America as a part of GABI. Several paleontologists (including the authors of this book) are committed to the study of the process that modified permanently the composition and distribution of land mammals in South America. The entrance of hunter-gatherers at the end of the Pleistocene occasioned the spectacular extinction of megafauna. However, this process is being completed by modern man. For this, research on recent distribution of vertebrates in South America has to be accelerated. During the last twentieth and twenty-first centuries, terrestrial and aquatic environments changed radically because modern human activities occasioned extinction, pseudoextinction, and alteration of distribution of many mammals. This disruption might make conventional and molecular studies of historical patterns and relationships between different lineages extremely difficult. However, fossils are still in the rocks. They are waiting for us to find them, unearth them, and make them drops of light for explaining the origin of a treasure in danger: the richest land mammal fauna of the world.

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The Great American Biotic Interchange

A South American Perspective

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