A volume summarizing results of ongoing research in the Bighorn and Clarks Fork basins compiled for an international conference on

*Climate and Biota of the Early Paleogene*

held in Powell, Wyoming, July 3-8, 2001

Edited by

Philip D. Gingerich

UNIVERSITY OF MICHIGAN
PAPERS ON PALEONTOLOGY NO. 33

2001
# TABLE OF CONTENTS

Frontispiece ................................................................. ii
Title page ................................................................. iii
Preface ....................................................................... v
Table of Contents ........................................................ vii

**Overview of Mammalian Biostratigraphy in the Paleocene-Eocene Fort Union and Willwood Formations of the Bighorn and Clarks Fork Basins**

*Philip D. Gingerich and William C. Clyde* ........................................................................... 1

- Sedimentology and Depositional Setting of the Willwood Formation in the Bighorn and Clarks Fork Basins
  *Mary J. Kraus* .............................................................. 15

- Not Just Red Beds: The Occurrence and Formation of Drab Sections in the Willwood Formation of the Bighorn Basin
  *K. Siân Davies-Vollum* ............................................... 29

- Biostratigraphy of the Continental Paleocene-Eocene Boundary Interval on Polecat Bench in the Northern Bighorn Basin
  *Philip D. Gingerich* .................................................... 37

- Refined Isotope Stratigraphy Across the Continental Paleocene-Eocene Boundary on Polecat Bench in the Northern Bighorn Basin
  *Gabriel J. Bowen, Paul L. Koch, Philip D. Gingerich, Richard D. Norris, Santo Bains, and Richard M. Corfield* .................................................. 73

- Pollen Assemblages and Paleocene-Eocene Stratigraphy in the Bighorn and Clarks Fork Basins
  *Guy J. Harrington* ..................................................... 89

- Turtle Diversity and Abundance through the Lower Eocene Willwood Formation of the Southern Bighorn Basin
  *Patricia A. Holroyd, J. Howard Hutchison, and Suzanne G. Strait* ......................................... 97

- Mammalian Biostratigraphy of the McCullough Peaks Area in the Northern Bighorn Basin
  *William C. Clyde* ..................................................... 109

- New Wa-0 Mammalian Fauna from Castle Gardens in the Southeastern Bighorn Basin
  *Suzanne G. Strait* ..................................................... 127

- Basin-Margin Vertebrate Faunas on the Western Flank of the Bighorn and Clarks Fork Basins
  *Gregg F. Gunnell and William S. Bartels* .................. 145

- Compendium of Wasatchian Mammal Postcranial from the Willwood Formation of the Bighorn Basin
  *Kenneth D. Rose* ..................................................... 157

- Taphonomy of Small Mammals in Freshwater Limestones from the Paleocene of the Clarks Fork Basin
  *Jonathan I. Bloch and Doug M. Boyer* ....................... 185