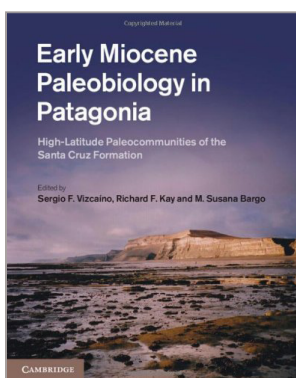




Early Miocene Paleobiology in Patagonia: High-Latitude Paleocommunities of the Santa Cruz Formation

A book review



Edited by Sergio F. Vizcaíno,
Richard F. Kay, M. Susana
Bargo

CAMBRIDGE UNIVERSITY
PRESS

378 pages | Hardback
1st edition | October 2012
ISBN 978-0-52-119461-7

Price: £99 (~€115)

[Early Miocene Paleobiology in Patagonia](#) is a wonderful collection of papers dealing with high-latitude palaeocommunities of the Santa Cruz Formation, a fossil-rich rock unit in Argentine Patagonia. The papers comprise of research on palaeobiology, palaeobotany, chronology, sedimentology, palaeoenvironments, palaeoclimate, morphology and palaeoecology. With 17 contributions, this volume of over 370 pages contains a wealth of information for anyone investigating high-latitude palaeocommunities, palaeoclimate and South American geohistory.

The editors, Sergio F. Vizcaíno, Richard F. Kay and M. Susana Bargo, have a very good pedigree for editing this volume of important Argentinian science that is often lost in translation or published in obscure resources. I very much welcome this volume as the editors have covered the majority of the research disciplines required to provide a great understanding of the Santa Cruz Formation. The English throughout the volume is very good and the editors and publishers should be thanked for this.

Cambridge University Press has done a superb job on this volume, producing a very high-quality book. The text is well set out, the tables are clear, the illustrations are consistently of good quality and the photographs are very clear and well presented. It is also nice to see that each chapter has an abstract in Spanish.

As with all edited volumes the first chapter sets out the background to the book and the research focused on studying the Santa Cruz Formation. Then the volume quickly covers the topics of tephrochronology, absolute dating and geochronology. Following this are

a set of contributions that provide information on the sedimentology and stratigraphy of the Santa Cruz Formation. The understanding of the palaeoclimate and palaeoenvironment of this formation is supported by documenting evidence using trace fossil assemblages (ichnology), plant cuticle and spore/pollen assemblages, and the presence and structure of the amphibian and squamate reptile compositions.

The remaining half of the volume is dedicated to the palaeoecology and palaeobiology of the Santa Cruz Formation. These contributions include such fossils as birds, sloths, anteaters, rodents, ungulates, armadillos, glyptodonts, carnivores and primates. The volume also discusses the diversity of the mammalian and marsupial assemblages, with many of the contributions deal with taxonomy, body mass, ecology and ecomorphology. As previously mentioned, the illustrations and photographs are of high quality and these are clearly depicted in these contributions with stunning line drawings showing life reconstructions.

The volume ends with an excellent review of the palaeoenvironment and palaeoecology of the Miocene Santa Cruz Formation by the editors. This chapter covers the background of what is known about this formation that includes the contents of the previous contributions.

Ultimately our understanding of the Santa Cruz Formation is immensely increased by this edited volume, which is a valuable resource for any graduate student, post-doctoral researcher or lecturer who either works on the Miocene from South America or has an interest in the general understanding of this geological epoch. The volume covers all the topics required to obtain a broader understanding of the Santa Cruz Formation and each contribution has an extensive set of up-to-date references for the reader to follow up. This is a volume that you will not be disappointed in. I have enjoyed reading it so much that I wish I could take some time off to travel to Argentina and have a guided tour of the Early Miocene Santa Cruz Formation to see all the wonderful information I have read in this book.

Darren R. Gröcke
Reader in Stable Isotope Geochemistry
University of Durham, UK