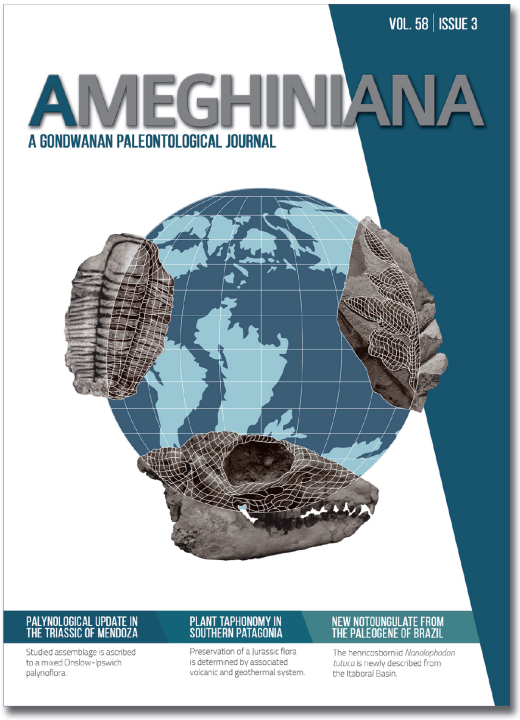
AMEGHINIANA
A GONDWANAN PALEONTOLOGICAL JOURNAL



BIOLOGICAL CONSEQUENCES OF PLATE TECTONICS: NEW PERSPECTIVES ON POST-GONDWANA BREAK-UP—A TRIBUTE TO ASHOK SAHNI

Guntupalli V. R. Prasad, and Rajeev Patnaik (Eds.) 2020. 432 pp. Vertebrate Paleobiology and Paleoanthropology Series. Springer Nature Switzerland AG. ISBN 978-3-030-49752-1 (paper). ISBN 978-3-030-49753-8 (ebook).

FERNANDO ABDALA

Unidad Ejecutora Lillo (UEL), CONICET-Fundación Miguel Lillo, Miguel Lillo 251, San Miguel de Tucumán T4000JFW, Tucumán, Argentina.

To cite this article: Fernando Abdala (2021). BIOLOGICAL CONSEQUENCES OF PLATE TECTONICS: NEW PERSPECTIVES ON POST-GONDWANA BREAK-UP—A TRIBUTE TO ASHOK SAHNI. *Guntupalli V. R. Prasad, and Rajeev Patnaik* (Eds.) 2020. 432 pp. Vertebrate Paleobiology and Paleoanthropology Series. Springer Nature Switzerland AG. ISBN 978-3-030-49752-1 (paper). ISBN 978-3-030-49753-8 (ebook). *Ameghiniana 58*(3), 297–298.

PALYNOLOGICAL UPDATE IN THE TRIASSIC OF MENDOZA

Studied assemblage is ascribed to a mixed Onslow-Ipswich palynoflora.

PLANT TAPHONOMY IN SOUTHERN PATAGONIA

Preservation of a Jurassic flora is determined by associated volcanic and geothermal system.

NEW NOTOUNGULATE FROM THE PALEOGENE OF BRAZIL

The henricosborniid *Nanolophodon tutuca* is newly described from the Itaboraí Basin.

ISSN 0002-7014

AMEGHINIANA - 2021 - Volume 58 (3): 297–298

BIOLOGICAL CONSEQUENCES OF PLATE TECTONICS: NEW PERSPECTIVES ON POST-GONDWANA BREAK-UP—A TRIBUTE TO ASHOK SAHNI. *Guntupalli V. R. Prasad, and Rajeev Patnaik* (Eds.). 2020. 432 pp. Vertebrate Paleobiology and Paleoanthropology Series. Springer Nature Switzerland AG. ISBN 978-3-030-49752-1 (paper). ISBN 978-3-030-49753-8 (ebook).

This volume is a welcome contribution to a palaeontologist's library. It provides a good synthesis on the current state of palaeontology in India, offering new insights to old questions. The opus is well illustrated and the text makes for easy reading. The authors are commended for their valuable contributions.

Besides being a tribute to the prominent Indian palaeontologist Ashok Sahni, this volume is also dedicated to the French palaeoherpetologist Jean-Claude Rage who passed away in 2018 and is present in two contributions of the book.

There are 17 contributions that can be summarised as 14 chapters on fossil tetrapods and three on fossil plants. India, understandably, is clearly best represented in the chapters, but there are two contributions on Australian fossils and two on African ones. Considering time, 10 chapters are related to the Mesozoic (Jurassic to Cretaceous), two consider the K/T transition as one of the main topics, and six are from the Cenozoic. The majority of the Cenozoic chapters, as well as those dedicated to the K/T transition, have a strong palaeobiogeography component.

The chapters have a chronological ordering starting with the Mesozoic record. Prassad and Parmar provide the first record of ornithischian and theropod dinosaur teeth from the Middle Jurassic Kota Formation of India, with a complete reference to the palaeontology, biochronology and biogeography of the unit, concluding that there is a marked Laurasian component in the fauna. Visna and Prasad analyze the late Mesozoic palynoflora of India and correlate it with those from Gondwana, recognizing four phases of floral transitions in India and a close correlation with that of eastern Antarctica and Australia. In the following two chapters, Rich and colleagues describe two new Cretaceous mammals from Australia, one presented as one of the smallest known mammals, and the other as the largest toothed monotreme. Prasad and colleagues combine temporal record, plate tectonics and climate to analyse the global early evolution of angiosperms. Rage *et al.* revise Maastrichtian lissamphibians and squamates from India, which they recognized as mixed (Gondwana and Laurasia) in origin. Lapparent de Broin and Prasad update the record of Late Cretaceous Bothremydidae turtles, concluding that they are an important component of Late Maastrichtian pleurodire assemblages from India. Chatterjee provides a summary of the record of dinosaurs in the Mesozoic during the drifting Indian subcontinent, and also gives a brief but important summary of the history of Indian institutes devoted to the study of the Mesozoic, providing nice photographic documentation and several historical references to the findings scattered throughout the paper. Halliday *et al.* present an interesting palaeogeographic study of vertebrate faunas from the Late Cretaceous to the Eocene in migrating India by using a network approach. Rage and Gheerbrant present another palaeogeographic faunal analysis, this time of the African island from the Late Cretaceous to the Miocene. Paul and Dutta investigate biomarkers such as terpenoids, coal and lignites during the migration of India, finding predominance of conifers in the Cretaceous and a proliferation of angiosperms in the early Paleogene. Solé *et al.* expand the knowledge of the Indian Eocene apatemyd mammals, reporting new material represented by isolated teeth and fragments of mandible with teeth. Kapur studies the dispersion of the early Eocene non-volant fauna from western India, which is the oldest Cenozoic record from the Indian subcontinent. Thewissen and colleagues expand the knowledge and the taxonomy of the Eocene artiodactyl *Indohyus*, the fossil sister taxon of Cetacea. Flynn *et al.* study the very early evolution of Murine rodents from the Miocene of the Indian subcontinent, interpreting the area as the cradle of this successful cosmopolitan group. Patnaik describes new

material of rodents from the late Miocene to the Pleistocene, including some phylogenetic and palaeogeographic insights of rodents from India, Asia and Africa. Gilbert and colleagues compare models of Miocene dispersals of primates between Africa and Eurasia.

This opus provides a good panorama of different research programmes dealing with the fossil signatures and movement of India in a pivotal moment of the history of this subcontinent. A diversity of subjects is included in the volume and only contributions on invertebrate fossils are missed. As is usual in this kind of book, the contributions are unbalanced; some of them provide a good summary of the state of the knowledge on the research area, and others are more limited to punctuated events. Nonetheless, the volume is highly recommended for those wanting to delve into eastern Gondwana during the late Mesozoic and Paleogene.

Fernando Abdala
Unidad Ejecutora Lillo (UEL), CONICET
Fundación Miguel Lillo, Miguel Lillo 251,
San Miguel de Tucumán T4000JFW
Tucumán, Argentina
nestor.abdala@wits.ac.za