



第八届国际侏罗系大会地层丛书

沙金庚 史晓颖 周忠和 王永栋 主编

四川盆地陆相三叠系与侏罗系

王永栋 付碧宏 谢小平 黄其胜
李奎 李昱 刘兆生 喻建新
泮燕红 田宁 蒋子堃 / 编著



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The Terrestrial Triassic and Jurassic Systems in the Sichuan Basin, China

Wang Yongdong, Fu Bihong, Xie Xiaoping,

Huang Qisheng, Li Kui, Li Gang, Liu Zhaosheng

Yu Jianxin, Pan Yanhong, Tian Ning & Jiang Zikun

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序

侏罗纪(200~145Ma)是地球历史上地质作用非常活跃的重要时期,发生了许多重大的全球性地质、地理、气候、生物和成矿事件。在这个时期,中国及其邻区东濒古太平洋,西通特提斯,北连俄罗斯,南临古西太平洋—东特提斯交汇地带。因此,中国及其邻区的侏罗系是记录发生在特提斯区、亚北方区和太平洋区海洋及大陆中各种侏罗纪重大事件的理想载体。

国际侏罗系大会是以侏罗系为主题、四年一度的国际学术研讨活动。来自世界各国的侏罗系专家学者汇聚一堂,围绕侏罗纪的地层学、古生物学、古地理学、古生态学、古气候学、沉积学、地球化学、古地磁学、构造学、天文地质学、矿产与资源、地学教育、地质遗产保护等问题展示和交流他们的最新研究进展和成果、技术和思想,并预测未来的地球发展,讨论联手合作应对全球变化的对策和研究方向。

第八届国际侏罗系大会将于今年8月在中国举行。地层学是研究地球历史和生命与环境协同演化的基础。为了使来自世界各国的与会者和国际侏罗系同行更多地了解和关注中国乃至亚洲的海相与非海相侏罗系及其研究进展,我们组织编写了五本以介绍中国及其邻国泰国侏罗纪地层为主的丛书:《四川盆地陆相三叠系与侏罗系》,《新疆北部的侏罗系》,《辽宁西部侏罗系与白垩系概览》,《西藏特提斯侏罗系》和《泰国的侏罗系》。其中,前两部书描述了中国西部四川和新疆北部大型陆相盆地的侏罗纪和部分三叠纪地层;第三本书概述了中国辽西盛产世界著名的热河生物群化石库的侏罗纪和白垩纪地层;第四本介绍了中国西藏南部的特提斯型侏罗系(将于会后出版),第五本记述了泰国的海相侏罗系与非海相侏罗纪地层、动物群组成、古生态、古环境、矿产以及构造和古地理。

这套地层丛书的出版,得到了国际地球科学计划 IGCP506 项目、国家自然科学基金委员会、中华人民共和国科学技术部、中国科学院和四川省射洪县人民政府等的支持与资助(见各书致谢语)。除

了主编外,陈丕基、孟繁松、张师本、章森桂、卢辉楠、张允白等教授对丛书初稿进行了认真的评阅,并为作者们提供了非常有益的建议和帮助。没有作者们的通力协作和努力、章森桂等编辑的辛勤工作,丛书就不可能按期出版。我们对以上各单位、作者、评审专家和编辑等的鼎力支持表示由衷的谢忱!由于组织编写的时间仓促和工作量较大,书中难免会存有少许错误,敬请同仁和读者鉴谅。

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2010 年 7 月 19 日

PREFACE

The Jurassic period (200~145 Ma) witnessed a number of important geological, geographical, climatological, biological and metallogenical events happened globally.

During the Jurassic, China and environs as a domain was bordered by the western palaeo-Pacific in east and by the Tethys in west, and it was connected to Russia in north and located at the junction between the western palaeo-Pacific and northeastern Tethys. The Jurassic rocks of China and environs are therefore the largest geological body which has recorded various geological events happened in the Tethyan, subboreal and palaeo-Pacific realms both in marine and non-marine systems.

The International Jurassic Congress is an international scientific forum on the Jurassic held once every four years sponsored by the International Subcommittee on the Jurassic System. The Jurassic experts and students from around the world gather together to present their recent work and research results on the topics of geology, stratigraphy, palaeontology, palaeobiology, palaeogeography, palaeoecology, palaeoclimatology, sedimentology, geochemistry, palaeomagnetism, tectonics, astronomic geology, and mineral and energy resources, as well as ideas on geosciences education and geoheritage protection, to predict the Earth's future, and to discuss the international collaborations focus on such issues as challenges of global change.

The 8th International Jurassic Congress will be held in China in August of 2010. To provide a better introduction for all the congress participants and colleagues worldwide about the current study on the Jurassic in China and environs, and to highlight the major progresses in global marine and non-marine Jurassic studies made by the Chinese and Asian Jurassic workers, we have compiled a series of books on the Jurassic stratigraphy, consisting of five books, including "The terrestrial Triassic and Jurassic Systems in the Sichuan Basin, China", "The Jurassic System of northern Xinjiang, China", "Outline of the Jurassic and Cretaceous Systems in western Liaoning, NE China", "The Tethyan Jurassic of southern Tibet, China", and "The Jurassic System of Thailand". The first two books mainly describe the non-marine Jurassic and part Triassic strata of the largest basins in Sichuan of southwestern China and northern Xinjiang of western China, the third one outlines the Jurassic and Cretaceous strata that yield the famous Jehol Biota and other lagerstätten in western Liaoning Province, northeastern China, the fourth one introduces the Tethyan marine Jurassic in southern Tibet, southwestern China (to be published after the congress), and the last one describes the marine and non-marine Jurassic strata, faunal associations, palaeoecology, palaeoenvironment, tectonics and palaeogeography of

Thailand.

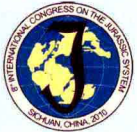
This series of stratigraphic books are dedicated to the 8th International Congress on the Jurassic System and the UNESCO-IUGS International Geoscience Programme IGCP 506. This work is supported by the National Natural Science Foundation of China, the Ministry of Science and Technology, PRC, the Chinese Academy of Sciences and the Shehong County People's Government of Sichuan Province. We sincerely thank Professors Chen Peiji, Meng Fansong, Zhang Shibin, Zhang Sengui, Lu Huinan and Zhang Yunbai for critically reading the manuscript and providing helpful discussions and comments for the authors. Special thanks are due to Prof. Zhang Sengui, the executive editor, for enormous assistance in editing.

We would like to finally thank all the related institutions, referees, authors and editors for their support and apologize for mistakes in the books due to hasty organization and preparation as well as limited time.

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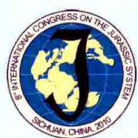
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