

Ruptures of Major Earthquakes and Active Deformation in Mongolia and Its Surroundings

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Review by Christopher G. Kendall

This elegant slim book assembles together under one cover a geological description of Western Mongolia and how the rapid deformation which is taking place in this region manifests itself in major earthquakes and faults scars. Since the area lacks vegetation, this active tectonic deformation is beautifully expressed by the surface exposure of the numerous faults of the region. This lack of vegetation makes Western Mongolia one of the best places in the world to relate major earthquake systems to surface topography and ruptures.

This book represents a compilation of an extensive series of studies by geologists from Mongolia, Russia, the United States of America, and France. The book begins by initially summarizing the regional geology and topography and deep structures of Western Mongolia and then goes on to analyze various regions in more detail. Essentially this book contains extensive summaries of the major fault trends of the area, their locations and topography and then characterizes them in terms of locals including the Mongolian Alty and Goni Alty, the Hangayn Nuruu and Central Mongolia, the Bulnay and Tsetserleg Fault System and the Hovsgol and Baikal Rift System.

The book is packed with beautiful black and white photographs which show very clear examples of the surface expression of the faults of Western Mongolia. These are tied to clear and simple maps. This book is well written and full of information and references. It will probably end up as the Bible for those who are interested in Mongolian area and its rapid deformation. It is definitely a book for the specialists but may be cited by others who need examples to demonstrate active deformation of earth crust and its relationship to major earthquakes and fault trends. The authors have certainly met that primary purpose of the book which was to provide a summary of surface ruptures of Mongolia and their relationship to major earthquakes. This is a clear and well produced text which is going to be cited by earth scientists for many years to come.