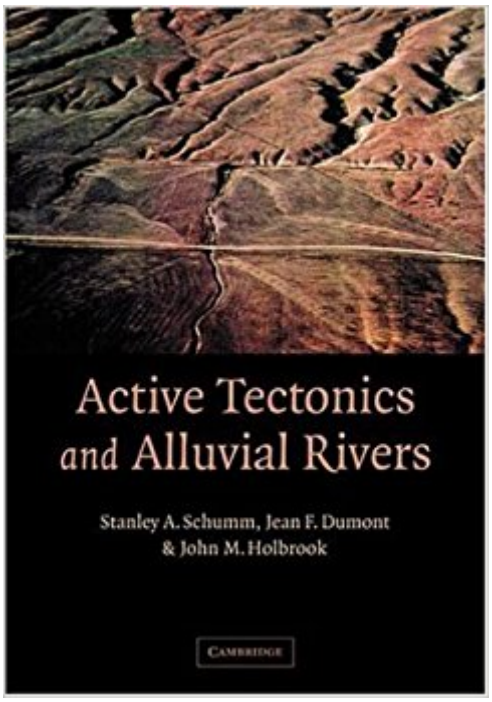
Active Tectonics And Alluvial Rivers



Synopsis

The interactions between tectonic uplift, river erosion and alluvial deposition are fundamental processes which have acted to shape the landscape we see today. These processes are of course ongoing, and are important not only in geomorphology, sedimentology and structural geology, but also hydrology and river engineering. The authors have combined their specialities to bring together evidence and a variety of examples from both field and experimental studies to demonstrate how alluvial rivers are responding to uplift, subsidence and lateral tilting. Such recognition of the nature of river response yield criteria for the identification of active tectonics elsewhere, especially in areas without a history of seismic activity, or in the stratigraphic record. This volume will be of interest to graduate students, consultants and academic researchers in geomorphology, sedimentology and stratigraphy, structural geology, hydrology, geophysics, and geography.

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Customer Reviews

"...an important new contribution to tectonic geomorphology and fluvial geomorphology. The authors have done an excellent job of bringing together theory of river processes, field observation, experiment study, and synthesis to better understand the connections between active tectonics and river processes. The book will be of interest to a variety of people, including civil engineers, physical geographers, hydrologists, geologists, and ecologists...It is a really good read." EOS

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sedimentology to bring together evidence and a variety of examples from both field and experimental studies to demonstrate how alluvial rivers are responding to uplift, subsidence and lateral tilting. This volume will be of interest to graduate students, consultants and academic researchers in geomorphology, sedimentology and stratigraphy, structural geology, hydrology, geophysics, geography.

When I overview the book I find that content is excellent for my field of interest. As I work predominantly in quaternary continental sediments in Pannonian Basin, I meet such good material considering river behavior related on tectonic movements like in south pannonoan realm. For me, it is quite good as I expected. I warmly recommend this issue.

The book arrives in good condictions. Is a very insteresting book.I’m reading and I am happy by de quality of book.

good . very fast, receive it next day. my company need it , it is recommend. I absolutely love this product! I purchased this product along with a cutting board for a fruit platter that I needed to make for a party this past weekend. This product worked perfectly. It cut right threw the hard watermelon rind also cut the pineapple so perfectly. I am very pleased with the purchase! If your thinking about ordering this product you won’t be disappointed. Thank you to the seller for a nice an smooth purchase!

"Active Tectonics And Alluvial Rivers" comes with a trio of authors that certainly sounds authoritative and reliable, although Dumont was unknown to me thus far (my bad!), but the names of Schumm and Holbrook definitely were enough for me... The main value of this quick and agile treatise lies in being possibly the first one specifically dealing with the relationship between tectonics and all manners of fluvial affairs. Treatments in recent textbooks by Miall and Bridge also cover the topic of course, but in this case we meet with unprecedented focus... In these days of explosion in research in all of the Earth sciences, it is not surprising that even an essay on such a specialized subject has to be structured in an intricate series of chapters and subsections ranging widely over many different subdisciplines and topics. The list of contents shows coverage of essentially all of the main aspects of fluvial geomorphology, hydrology and sedimentology in relation to factors of active tectonic control, positively highlighting throughout the importance of both forward and inverse approaches to the analysis of a wide range of field and laboratory (flume) case studies, including

relevant work by the authors themselves... The main letdown for me, however, came exactly from the general content of the book! I suppose no one would be daring to delve into the complexities of interactions between fluvial processes and tectonic controls without being fairly well grounded in the basics of the subject... Yet, I was left with a feeling that the authors all too easily glossed over an introduction to some main theoretical aspects of relevance to all the discussions that would follow. The structure of the whole book essentially consists in a long series of (even too) detailed descriptions and discussions of case studies, an approach that inevitably brings about some discontinuity. This doesn't really help the reader in forming a logical thread of synthesis on his mind, busy as he must be in making sense of all the different examples. Chapter summaries won't help either, as they often appear to be too cursory and simplistic, and in a couple of instances even report observations on issues that are not so relevant to what has been discussed, such as in chapter five on "Earthquake effects"! The final result is therefore that the reader is left with quite some homework to do in order to come out with general insights and principles from a somewhat spotty and fragmented maze of case studies... On the other hand, it is to be considered, as well, that the subject has never undergone extensive review in the past, and that its inherent difficulties (let's face it, anything river-related is a tricky mess!! By far the most complex geomorphic systems...) imply an open road ahead for research, still to be fully explored. So, although lacking in explicit overview, the book was not and could not have been intended to provide easy or ready-made answers! Let's say that a second, more careful read can clear up the mind and aid in pinpointing a few principles of general relevance... Of possible help however could be a paper published by two of the authors, which though much less detailed, contains the most interesting hints and observations you could gather from the book in a much more concise version! (Holbrook & Schumm, 1999, "Geomorphic and sedimentary response of rivers to tectonic deformation: a brief review and critique of a tool for recognizing subtle epeirogenic deformation in modern and ancient settings"", Tectonophysics 305: 287-306) In spite of my rather substantial criticism, I guess it's fair to say that as an introduction to the subject this little treatise should not be missed by anyone interested! A second edition could come up with updates from a steadily growing body of literature, and above all with more introductory and summarizing background all throughout, in order to better lead the reader toward understanding and, why not, inspiration for further research...

This is the first book, in my opinion, to really focus on the effects of active tectonics in the fluvial system regime. Many books focus on tectonic geomorphology or fluvial geomorphology, but none has integrated both subject areas for a thorough discussion on the integration of the two.I really

appreciated that the authors concentrated on case studies rather than jargon. The two background chapters are sufficient to start the advanced reader on the extremely interesting case studies. I also appreciated the division of the case studies into forward and inverse modeling approaches.The applicatons section was full of studies of modern approaches in engineering, stratigraphy, and neotectonic interpretation.Overall, this book was the perfect synthesis of tectonics and fluvial systems. Stan Schumm is a master on river morphology. He and Holbrook and Dumont should be commended on their effort!