

CHANGING RIVER CHANNELS by Angela Gurnell and Geoffrey Petts (eds.). New York: John Wiley and Sons, 1995.

The intent of this book is to mark the outstanding contribution of Ken Gregory to fluvial geomorphology. As such, twenty-two of his postgraduate students and colleagues have come together to share their appreciation. Gregory's CV is outstanding, including 19 books (15 of which were edited and coedited) and hitherto 100 published papers.

The collection of 19 chapters is an honorable manner to salute Ken Gregory. It has become a welcome fashion to honor our exceptional scholars with edited books containing papers by their students: Red's Wolman has recently been honored by his graduate students and Stan Schumm's are about to replicate the effort. Indeed, *Changing River Channels* is one of two companion edited books, the second (*Sediment and Water Quality in River Catchments*, edited by Foster, Gurnell and Webb) acknowledging the contribution of Des Walling.

The cover maintains that "the contributions are drawn from both the academic and the river management communities and these provide perspectives based upon British, European and North American examples". An important message of the Gregory tradition is, indeed, that both academia and management are represented, but it is unfortunate that, like many British geomorphology books, examples are almost totally from the UK (and some from North America). The interweaving of practical geomorphology and academia is represented by Malcolm Newson's paper, the last chapter in the book. Though last, Newson's message is loud and clear: he calls upon geomorphologists to descend from their ivory towers and take part with engineers in the design and management of their fluvial surroundings. His outcry is welcome and also affords an opportunity to acquire funding in a continuously competitive climate. Nevertheless, were I an engineer I would be dubious of the geomorphological expertise that I could utilize based on some of Newson's listed examples. Scour around bridge piers is but one area where engineers have contributed so much more than geoscientists.

Geoffrey Petts opens the book with the contention that the study of river channel change is a geographical tradition. I enjoyed reading his succinct chapter and commend it to the student who wishes to enter this field. He asserts that "fluvial geomorphology is a field science: classification and description are at the heart of this science." That laboratory and theoretical, modelling-based fluvial geomorphologists would agree with the first generalization is doubtful. Whether field-based, process measuring fluvial geomorphologists would contend with 'classification and description' is obvious. This chapter, like all but one in the book, is not a research paper reporting on a specific finding. Instead, it is a review, and it is self-evident that reviews are at times based largely on the experience of the reviewer.

Starkel and Brown relate to Holocene changes and, as such, their tools are different from those used by present day process geomorphologists. Whereas Starkel

uses Schumm-type relations between channel plan view and cross-sectional geometrical properties and discharge to relate to European Rivers, Brown utilizes pollen and other stratigraphic analyses to learn about channel changes in the UK. Changes in specific fluvial features are separately discussed. These include drainage density (Gardiner), cross sectional shape (Park) and meandering channels (Hooke).

Part II deals with the processes of change. Only two papers, Walling on suspended sediment and Gomez on bedload size, directly deal with processes. The other papers, Trimble on sediment budgets, Keller and MacDonald on large woody debris (LWD), and Gurnell on vegetation along river corridors refer to changes that can be calculated by budgets, can be related to LWD, and can be influenced by vegetation. It is understandable that the editors had to include given offers in several parts, but this part is less homogenous than Part I (Temporal and Spatial Dimensions) or Part III (Information for the Management of Change).

Des Walling continues to be exemplary at synthesizing available data, here to demonstrate that anthropogenic influences and climatic change have affected suspended sediment yields throughout the globe, including rare data from China and Russia. The review by Gomez is a good review of several of the bedload texture dilemmas. Keller and MacDonald on LWD present new research data, a refreshment.

Part III opens with information flow for channel management (Clark). This is refreshing reading for those accustomed solely to data crunching or modelling. The next two papers deal with the information on the fluvial system available from remotely sensed data (Milton et al.), and Downard's review, my favorite, of the errors involved in topographic information. These are followed by reviews related to channel geometry-discharge relations and channel classification for management.

Part IV, Management, includes Andrew Brookes' review of channel restoration, a recommended reading for the novice. Gardiner deals with appraisals of sustainable water environments, and the book ends with the need for geomorphology to be involved in design (Newson).

This book is a worthy contribution in that it salutes one of this century's outstanding fluvial geomorphologists. It will be used mainly by students looking for short reviews, but as such, is a welcome contribution to any university library.

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