

A bibliography of hydrological, geomorphological, sedimentological, biological and hydrochemical references to the Institute of Hydrology experimental catchment studies in Plynlimon

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This bibliography provides a backdrop to the environmental research completed within the context of the Plynlimon catchment study area. It includes the bibliography produced by Kirby *et al.* in 1991 plus references from (1) a computer-based literature search using all the standard water industry and water research data bases and (2) a questionnaire sent to all the contributors to this special volume of Hydrological and Earth System Sciences. The bibliography does not include the vast number of reports generated for various funding bodies over the years.

The bibliography, comprising about 300 publications from 1960 to 1998, shows overwhelmingly the wealth and success of the endeavours of the various institute and university groups working in the Plynlimon catchments.

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Book review

Introducing groundwater: second edition by Michael Price. Chapman And Hall (London), 1996: ISBN 0 412 48500 1, price £14.99

Within the land component of the hydrological cycle, groundwaters are important in relation to water transit routes, storage and water resources. Clearly, when dealing with groundwater issues, focus is naturally given to permeable rock types as these provide major aquifer storage, and inputs to river flow especially under baseflow conditions. However, even for 'hard rock' low permeability areas, shallow groundwaters dominated by fracture storage and flow pathways are important in terms of water movement. Indeed, in more arid 'hard rock' areas, fracture-dominated aquifers provide important and, in some cases, the dominant drinking and irrigation water resources. Consequently, in many parts of the environmental sciences and water and resources management, an understanding of groundwaters is important both in terms of physical (hydrology) and chemical (water quality pollution) aspects.

In the book 'Introducing Groundwater', Michael Price provides a masterful background to the subject. The book, (278 pages in length and in paperback form) provides a major extension to an earlier edition. After an introduction, the new edition comprises 12 chapters dealing with the dominant themes to groundwaters occurrence, the role of groundwaters within the hydrological cycle, their

importance to water resources and their role for maintaining river flows even under drought conditions. Within this setting, more detailed infilling aspects are covered such as presenting the fundamental equations of water flow through porous and fractured media, the basis and use of modelling techniques describing such flow, the practical issues of field monitoring and measurement techniques and the development and use of water wells. Towards the end of the book, the growing issues of water quality and pollution are addressed and related to the major issues of environmental management and legislation both in terms of protecting, maintaining and improving groundwater resources.

The book is needed; it is very well structured, very clearly written, concise and pitched at the correct level of detail. Furthermore, the author provides something very rare in introductory text books, personal and contagious enthusiasm for the subject. At £14.99, the book is very good value for money. It provides an ideal introduction for both students and more established environmental scientists. I very strongly recommend purchase.

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