

## Preface

The idea for this book arose when I was asked to prepare a paper for an international conference held in London in July/August 1997 to mark the bicentenary of the birth of Sir Charles Lyell. The brief which I was given was to review how the science of hydrogeology had developed in the UK during the 19th century (Mather 1998).

Searching the literature it was soon clear that, although there was a wealth of published information, this was hidden away in obscure journals and forgotten pamphlets and had been ignored by historians of the science. Thus the distinguished American hydrologist Oscar Meinzer documented the contributions made by French, German and Italian engineers, geologists and drillers but amongst British scientists found only the work of William Smith worthy of note (Meinzer 1934). Recording the early years of the 20th century he wrote '... British hydrologists have been active in developing groundwater supplies but have perhaps contributed less notably to the science of ground-water hydrology' (Meinzer 1934 p. 20).

The papers in this book represent an attempt to document the achievements of British hydrogeologists during the last 200 years and to show that not all of their work has been descriptive. 25 contributions are included, the majority of which deal with the period between 1800 and 1975. 15 of these were presented at a joint meeting of the History of Geology and Hydrogeological Groups of the Geological Society held in London on 12th December 2002.

Following an introductory paper by **Mather**, papers by **Torrens**, **Price**, **George**, **Mather** *et al.*, **Tellam** and **Prene** record the careers and achievements of William Smith, John Snow, William Whitaker, Joseph Lucas, Robert Stephenson and the members of the Geological Societies of Liverpool and Manchester, all of whom made major impacts on hydrogeological thinking during the 19th century. Papers by **Younger**, **Rose** and **Robins** *et al.* concentrate on groundwater work in Ireland and Scotland and the contribution of mining and military scientists and engineers to groundwater development.

The history of some of the British spas and hydro-pathic establishments is reviewed in **Edmunds**, **Fuller** and **Spence & Robins** and the work of British hydrogeologists overseas in **Lloyd**, **Hazell**, **Rose** *et al.* and **Barker**. From 1935 the Geological Survey began to have a significant role. Together with some of the personnel involved, this is reviewed in **Downing**, **Downing & Gray**, **Gray & Mather** and **Gray**. The final chapters by **Downing** *et al.*, **Downing**, **Headworth** and **Brassington** review the

innovative work of Norman Boulton and the more recent developments which have taken place since 1965. There is some minor overlap between the later chapters but this has been allowed to remain because of the different perspective provided by their authors.

In any book of this kind it is inevitable that some omissions will occur and that the contribution of some workers will not receive the recognition which it perhaps deserves. However, this does not set out to be a complete record of the development of hydrogeology in Britain over the last 200 years, rather a series of snapshots and reviews of particular periods and the people involved. Despite this it is hoped that most of the important events and individuals have been covered.

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## References

- MATHER, J. D. 1998. From William Smith to William Whitaker: the development of British hydrogeology in the nineteenth century. In: BLUNDELL, D. J. & SCOTT, A. C. (eds) *Lyell: the past is the Key to the Present*. Geological Society, London, Special Publications, **143**, 183–196.
- MEINZER, O. E. 1934. The history and development of ground-water hydrology. *Journal Washington Academy of Science*, **24**, 6–32.

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