AFBI Soils Publications Book Reviews

Book review 1

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Soil survey went out of fashion a generation ago. It was dismissed by people who should have known better as 'stamp collecting', an activity unworthy of a modern research organization. I do not know who should feel the more insulted the penologists or the philatelists. Certainly much soil survey had become routine, and many reports deriving from it were no more than catalogues of the regions covered. But to imagine that you could understand and plan the use of land without knowing what soil is where and what its qualities are was crass. Which successful farmer does not carry with him a mental map of the soil of his farm at all times, I wonder? Planners and advisers for larger regions cannot hold all the information they need in their heads; they must have it properly organized in physical databases, inventories of soil of regions, that they and everyone else with an interest can access.

Northern Ireland, isolated geographically from the rest of the United Kingdom and with its own Department of Agriculture, came to soil survey late. Its scientists had argued the case for a survey, and by 1987 its politicians were convinced of the value of a soil inventory of the whole Province for rational decisions on land use. And so began 10 years of systematic field survey. The result is a complete set of maps at 1:50 000, both on paper and in digital form, a generalized soil map at 1:250 000, a database on soil attributes, and this book, 214 pages in large (A4) format plus 24 pages of colour plates.

In case you think that Soil and Environment is simply another regional catalogue of soils then think again. It places the information on soil in the context of Northern Ireland's unique environment. It lists the main types of soil –Rankers, Brown Earths, Podzols and Gleys and their principal divisions, a no-nonsense classification - and traces their origins to the parent rocks, physiography and climate. You might think you have read all this before, too. But here we have in the first 56 pages (Chapters I and 2) a clear expose in the local context.

There follow five chapters, written by specialists in their respective fields, on the geology, climate, rivers, land cover, and the economics and politics of farming. The chapters are short, but they provide a proper background for understanding the distribution of the soil and the way that it is used.

Chapter 8, entitled ‘The soil maps' and extending over 32 pages, really is a catalogue. It describes the distributions of the main soil series, taking each of the 17 soil map sheets in turn, simplifying them as black-and-white sketches, and providing them with legends. You need this as the key to the maps themselves.

The final chapter illustrates some of the uses to which the survey has already been put. There are sections giving estimates of soil carbon, the soil's response to acid rain, water storage and release, and the assessment of land quality. The survey was completed in 1997, and so these examples are only the beginnings of its utility.

The book is richly illustrated with line diagrams and maps, coloured pixel maps showing atmospheric deposition of acid and excess over critical loads, soil hydrology, and the concentrations of several heavy metals in the soil. Most attractive of all are the colour photographs of Northern Ireland's landscapes, its many kinds of soil in profile, and several cross-sections through field drains to show their effects. These capture the essence of field pedology, and the quality of their reproduction would do credit to any tourist brochure.

Soil and Environment is a tour de force and an essential companion for anyone concerned with the land of Northern Ireland. It draws on the best of the earlier soil survey reports and sets a new standard in scientific reporting for both professionals and intelligent laymen. You get it all for £10!

Buy it.

Prof. R. Webster.

Book review 2

The author has stated his philosophy to be to present a 'soil survey memoir with a difference' and to avoid the stereotyped and boring documentation of data destined solely for specialist soil scientists. His intended readership embraces all those concerned with the use of land for agriculture, construction, conservation, and recreation as well as in research, environmental impact, and valuation for investment. His text differs characteristically from other soil survey memoirs in emphasizing practical application at the expense of formal description of soil and giving clarity priority over comprehensiveness. It should be of great value to practitioners and students. The various chapters are written with different degrees of penetration but always offer the basic concepts. This and the inclusion of chapters explaining applications of soil survey (carbon pools, acidification of soil, and HOST - hydrology of soil types - for example) give the book an international appeal. I should have liked to see a more extensive list of references, however.

Soil and Environment goes a long way towards communicating the results of soil survey to people who have to manage land. It deserves to be read widely, and it is likely to serve as a benchmark for future memoirs. Dr Cruickshank is to be congratulated for successfully linking the many and diverse aspects of Northern Ireland's land resources in a single coherent report. I strongly recommend it, and I am sure it will be a valuable addition to many libraries.

Dr. R.W. Fitzpatrick.