valley allowed Repton to show off his scientific side, in his hydrological engineering techniques and his interest in the theory of optics. A 'Digression', an extract reproduced from an earlier Red Book for Purley, recalls a walk along the Thames to show the field of vision of an east-west valley at contrasting times of day. In the morning the 'natural' features of water, trees and meadows are highlighted whereas the evening shows 'artificial' features of buildings, boats, paths, villages and towns.

The Red Book for Tewin Water along the valley is focussed on drainage rather than irrigation and the breaching of formally designed standing water to restore 'the rattling trout stream of Hertfordshire, fretting over its bed of gravel'. At the same time as celebrating county topography, Repton was keen to condemn the 'local attachment' of former owners who allowed the public road to cross the water and go close to the windows, 'leaving the house on a kind of peninsula surrounded by carts, wagons, gypsies, poachers &c &c'. Rather less of Repton's plan for Tewin Water seems to have been realised than the introduction of this book suggests. The park, if not the mansion, of Panshanger was made according to Repton's plan. Pevsner noted in 1953 that it was 'one of Repton's most perfect schemes' and it is still discernible in the remnants left by subsequent development.

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Tom Williamson, *Environment, Society and Landscape in early Medieval England: Time and Topography*, Woodbridge, Boydell Press, 2013. viii + 270 pp. £45. 9781843837374.

Ten years ago Tom Williamson published an important book on the nucleation of villages in the early middle ages. He put forward a practical explanation, in terms of the need to assemble plough teams rapidly to cultivate sticky clay soils when the weather allowed. Since 2003 new research projects have been completed, excavation reports have been published, and more work has been done on dispersed settlements. Williamson has been stimulated to return to the debate, again under the banner of the environment. He briefly reiterates his earlier position, but this book broadens the approach. He seems more willing than previously to acknowledge the contribution of local population growth, and he states more strongly that the eighth century saw stabilisation in settlement rather than nucleation. He accepts the role of human decision-making in particular environmental circumstances: 'Human agency [was] exercised knowledgably, in a real world'.

One of the strong features of this book is its survey of existing ideas and theories on such subjects as settlements, population, multiple estates, topography and social structure. From the sixth chapter Williamson begins to set out a new framework, and this involves an iconoclastic demolition of previous arguments and assumptions. He doubts whether enough small settlements dated before 850 have been found to support the idea that dispersed settlements were abandoned and their inhabitants congregated in nucleated villages towards the end of the first millennium. Indeed, he questions the concept of

nucleation as a single, coherent event. The 'planned village' is not seen by him as a helpful idea either. He sees villages growing incrementally, acquiring extra holdings taken out of adjacent open fields resulting in a 'strippy' plan (a new term). He is sceptical about dividing the countryside decisively into champion and woodland, in the first of which arable predominated, with more grass and trees in the latter. He finds that in the champion landscapes only forty per cent of the land was used as arable in the eleventh century, and pasture throughout the centuries was not as limited in area as is often said.

Williamson puts new emphasis on the 'river and wold' hypothesis, which presumes that settlements in 400 to 600 congregated on the light soils of the river valleys and that the high clayey ground between the valleys was taken into cultivation later. Villages developed from small early nuclei in the eighth century which gained population through the next four centuries, and fields likewise were gradually extended. Williamson's rural world is one of self-help and evolution, constrained by the natural realities of soils and climate. Access to water supplies, for example, was crucial. Even lordship was home grown, as dominant families emerged from the ranks of the peasantry, rather than being imposed from outside. Unpicking the various factors is, as he repeatedly says, a matter of great complexity and there are no easy answers to such puzzles as to why areas of woodland persisted in some regions.

Everyone can agree that fully convincing solutions to the dilemmas remain elusive. The various lines of approach which are centred on particular themes, such as woodland and champion, nucleation and planning, the minster hypothesis, the multiple estate, river and wold, are all simplifications and can be found wanting. They help us, however, to organise our thoughts around the multi-stranded problems of settlement and landscape, as Williamson has demonstrated here. Without these landmarks to guide them, less acute minds than his may lose their way.

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