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influenced by Cullen, to the eight initial years of practice in Stafford. It was during this period, perhaps around 1770, that he seems to have taken up field botany seriously. In 1775, seeking a larger stage for his abilities, he was told by Erasmus Darwin of a promising opening in the nearest city, the then fast-growing Birmingham. There, he speedily prospered, to such an extent that eleven years later he was wealthy enough to lease one of the local big houses, Edgbaston Hall. The career was not without its traumas, however, and latterly he fought a losing battle with consumption, twice having to spend winters in Portugal. He died a year or two just short of sixty.

It was soon after the move to Birmingham that a patient asked him for his opinion of a recipe for the cure of dropsy which had been handed down within the family. It had come from an old Shropshire herb-woman, he discovered, and consisted of a "cocktail" derived from twenty or more different plants. Thanks to his botanical knowledge, Withering spotted at once that the foxglove was the key one of these, and there then followed ten years of patient experimenting by him to establish the therapeutic limits of the drug. The methods he used, his detailed and careful reporting of his results, the attention he gave to product quality and standardization, and his development of the technique of dose titration were all very advanced for the time and are what he primarily deserves to be remembered for—rather than (as popular legend wrongly has it) as the discoverer of digitalis.

At the same time, Withering is rightly hailed today as a pioneer of the view that there is something to be learned of the properties and virtues of natural substances from "the empirical usages and experience of the populace". Here his expertise in botany came into its own. How far that expertise was crucial in his digitalis detective work is a matter for conjecture, but it is clear that it was important in a general way in giving him a wider awareness. It is therefore disappointing that the treatment in the book of the botanical dimension is so thin, for Withering is a figure of almost equal significance in the history of field botany as in that of clinical pharmacology. Indeed the second (1787) edition of his *Botanical arrangement*, the other publication he is known for, was the first handbook on the British flora to be cast in a deliberately popular mould—to the extent of being written in English and even bowdlerizing the Linnaean sexual terms for fear of alienating its many hoped-for women purchasers. It became the bible of a generation, which it was chiefly instrumental in introducing to those two central items of equipment, the vasculum and the plant-press. Deservedly, it went through three editions in Withering's lifetime and eleven more after his death. Any future biography of Withering will be seriously imbalanced if it fails to deal adequately with this other aspect.

David E. Allen

JOHN DOUGLAS, *Medical topography of Upper Canada*, reprint of 1819 ed., with introduction by C. G. Roland, Canton, Mass., Science History Publications, 1986, 8vo, pp. xii 45, \$9.95.

John Douglas, Assistant Surgeon to the 8th Regiment, published this work in 1819 to record the medical history of the British forces in Canada in the war of 1812 and to prepare his fellow medical men for any future hostilities in North America. It is now reissued with an introduction by Dr Charles G. Roland and is a useful addition to the short shelf of works of this period available to medical historians of Canada. Douglas allows us a glimpse into the mind of a conventional military medical man of the period. He believed in rigorous intervention, copious bleeding, liberal use of mercury, and quick battle-field surgery. Douglas's careful description of the fly-infested wards of York general hospital and the maggot-ridden wounds of the patients gives a vivid glimpse of the conditions under which he worked in the war. Battle-field casualties are recorded in the standard medical topographical approach, which describes geography, climate, and the seasonal pattern of disease associated with climatic changes in particular locations. There are some tentative comparisons drawn between Canada and the West Indies, where Douglas had previously served. Douglas chose not to attempt any statistical analysis of his topic, preferring only "a faithful narrative of all that I have witnessed on service . . . in the Upper Province of Canada." Dr Roland's introduction, like the book itself, is short, and one regrets that he did not have the space to bring more of his extensive knowledge of the place and the period to bear on Douglas's work.

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JOHN KNOTT, Popular opposition to the 1834 Poor Law, London and Sydney, Croom Helm, 1986, 8vo, pp. 284, £19.95.

Many distinct advances in scholarship have recently converged to re-emphasize the centrality of the Poor Law to the social history of English medicine. It has lately become clear, for the first time, just how extensive were disbursements for sick paupers under the parochial system of outdoor poor relief first set up by Elizabethan statute and continuing right down to the abolition of the Old Poor Law in 1834. By the eighteenth century, an informal "health service" for the poor operated in most parishes, and it had become normal for vestries to contract with a local surgeon to provide comprehensive (if necessarily somewhat rudimentary) health cover for the aged, the sick, and the incapable. The Old Poor Law came under increasing fire early in the nineteenth century for its alleged "extravagance", and it is clear that medical bills formed no small proportion of its costs. When the New Poor Law was introduced in 1834 under the ideological direction of Benthamite political economy, much tighter control was kept on medical payments. Not surprisingly, resistance to the New Poor Law was fierce and prolonged. For, as John Knott's lively book rightly insists, popular hostility to it was based not upon vague and ignorant anxieties, but upon a well-informed grasp of how it would further penalize misery.

Dr Knott devotes most of his space to an account of the shaping of opposition to the passing, and then to the implementation, of the New Poor Law. Petitions, riots, and the storming of the new workhouse "bastilles" began in the South, but spread to Wales, East Anglia, and the industrial North. In numerous towns, elections to the new boards of guardians were boycotted, or were used as embarrassing shows of strength by the opposition; and Knott shows, in the core of his book, how the election of members hostile to the new system created administrative chaos in such centres as Oldham, Todmorden, and Huddersfield, where working-class hostility was strengthened by middle-class backing and the influential support of dissident Tories such as Richard Oastler.

Importantly, he establishes that more was at stake in popular resistance than questions of payments to the poor, or even the principle of "less eligibility" and compulsory institutionalization in the workhouse. Hatred of the New Poor Law echoed and amplified a multitude of other fears articulated by the common people that they were about to be dragooned by a new police state. The cholera epidemic of 1832 had triggered panic over powers of compulsory quarantining and hospitalization; and, above all in the popular mind, the New Poor Law seemed to combine in a pincer movement with the 1832 Anatomy Act. Surgeons were to have automatic access to unreclaimed bodies from the workhouse for dissection purposes. Thus it seemed as if paupers were being made over as medical guinea-pigs.

Medical History readers may well have a feeling of déjà vu when examining Dr Knott's passages dealing with this issue (pp. 260–263); that sense will be increased by additionally scrutinizing his 'Popular attitudes to death and dissection in early nineteenth century Britain: the Anatomy Act and the poor' (Labour History (Australia), 1985, **49**: 1–18). The reason for this is that they will already have read much of it, literally verbatim, elsewhere, in Dr. R. Richardson's 'A dissection of the Anatomy Act', Studies in Labour History, 1976, **1**: 1–15. Line after line, and occasionally sentence after sentence, is reproduced by Dr Knott, with at most the token "fig leaf" of a word or two altered. Thus Richardson wrote in 1976 that Henry Hunt "spoke of fear of dissection as one of 'the natural feelings of mankind' and cited the case of Dr Hunter, who although 'he had dissected so many himself, up to the very last moment of his life declared that he