

Book Reviews

The British Isles

D. M. HADLEY, *The northern Danelaw: its social structure, c. 800–1100* (Leicester UP, 2000). x + 374 pp. 52 figs. £55.

Dawn Hadley's aim in this excellent monograph is to examine the key influences that helped to shape the particular society (predominantly populated by free persons) and institutions (such as sokes, scirs and wapentakes) of the northern Danelaw during the early middle ages. In doing so, she seeks to steer a middle course, one which avoids both the more traditional interpretations of Stenton, who saw the distinctive institutions of the Danelaw as ones solely derived from the impact of a large group of Scandinavian settlers, and the revisionist ideas of Sawyer, who saw little sign of Scandinavian influence, either in cultural or institutional contexts, within the Danelaw. Mirroring much recent academic research, therefore, Hadley's approach seeks to destabilize more conventional and polarized ways of understanding the past, and to emphasize the contingency of the regional cultures and institutions of the Danelaw.

Hadley's discussion of these difficult themes deserves much praise, not least for the thematic and geographical breadth that she brings to her study. She develops her argument using a broad range of documentary and archaeological evidence, including placenames, charters, legal texts, medieval surveys and information from archaeological sites. Crucial here is her admirable effort to reconcile the different messages communicated by these various sources, and for this she is to be commended. Equally praiseworthy is her effort to contextualize the historical geography of the northern Danelaw by exploring the nature of society and institutions in other parts of Europe during the same period. Indeed, one of her main arguments is that historians have been too ready to accept the institutional and societal distinctiveness of the northern Danelaw because of their use of Great Britain as a frame of reference. When considered at a European scale, many of the societal features of the northern Danelaw lose some of their uniqueness. This geographically-expanded approach also means that the book should be of interest to more than the limited group of individuals interested in the historical geographies of northern England. It has much to say concerning other

regions of Europe during this time and is, therefore, deserving of a wide readership.

I have a few qualms regarding the style of the monograph, though I should admit at the outset that this may be due to my reading of it as an historical geographer rather than a medieval historian. At times, the thread of the argument became a little lost because of the – in my mind – overly empirical emphasis. Although I appreciate the need to base one's arguments on the sometimes difficult and contradictory evidence that exists for the early middle ages, I was left a little lost at times concerning the focus of the argument. This is a minor complaint. Hadley's book demonstrates her admirable grasp of early medieval sources, along with her keen analytical mind. It is also an important contribution to our understanding of the nature of early medieval society, both in the northern Danelaw and further afield. I am confident, therefore, that it will become required reading for anyone interested in understanding this key period in early British history. Moreover, at a time when there is much academic and popular questioning of the interrelationship between regional and more national cultures and institutions within the UK, Hadley's exploration of the distinctive features of the society of the northern Danelaw during the early middle ages is a timely reminder of the deep historical roots of British regional geographies.

RHYS A. JONES

BERNARD JENNINGS, *Yorkshire monasteries: cloister, land and people* (Otley: Smith Settle, 1999). v + 246 pp. 135 illus. £17.95.

This volume is the first of an ambitious local publishing project, *Exploring Historic Yorkshire*, which aims to provide for the interested lay person a scholarly and well-illustrated introduction to the history of the pre-1974 shire which is firmly rooted in the landscape. Thus it differs both in approach and in its intended audience from Janet Burton's magisterial study, *The monastic order in Yorkshire, 1069–1215* (1999), which appeared too recently for its findings, for example on the narrative histories of Selby, Whitby, and St Mary's, York, to be incorporated here.

In 1066 there were no monasteries in Yorkshire, then, as it remained until 1974, the largest English shire. The

Viking raids of the previous two centuries had had a major impact, and this was exacerbated following the Norman Conquest by the 'harrying of the North'. Yet by the end of the middle ages Yorkshire was home to a large number of religious houses of all kinds: known pre-eminently, perhaps, for the great Cistercian abbeys such as Rievaulx or Fountains, but including other notable foundations such as Selby or St Mary's York; one of the largest of the Gilbertine double houses, Watton; a major Carthusian centre at Mount Grace, to say nothing of poorer and much less prestigious nunneries, and smaller male communities, as well as friaries of all the major mendicant orders in Yorkshire towns, large and small. Jennings provides a lively account of monastic developments and growth in the shire, first establishing a context for the expansion and then discussing the different orders in turn, before a final discussion of the Dissolution. With well-chosen, excellent illustrations and a useful gazetteer of monastic sites listed as an appendix, this is a attractive introduction to the subject for the general reader, and a helpful synthesis, based on a regional study, for the undergraduate. It is of less value for the specialist. There is no discussion of the sources or of their reliability, and surprisingly for a study explicitly 'relating the historical record to what can be seen on the ground' there is relatively little discussion of the impact of the monasteries on the rural economy and landscape, or, more particularly, on Cistercian contributions to clearance and drainage. There are curious omissions in the bibliography. Little or no use has been made of Wardrop's fundamental study of Fountains Abbey, nor is there explicit reference to Waites' extensive work on the monastic rural economy. A number of other recent works, for example on the Gilbertines and Robert of Knaresborough, have been ignored. Moreover, the explicit omission from discussion of hermits (many of whom were found throughout the medieval period in Yorkshire), hospitals, and the military orders is hard to justify. The eremitical ideal was central to monasticism and provided the inspiration for the 'new' monasticism of the twelfth century; hospitals were usually structured on quasi-monastic models and some were actually formally incorporated in monastic orders; the military orders were, of course, monks with specific military and eleemosynary functions. Inevitably, there are one or two misleading statements or simplifications. Minsters (p. 3) were not parish churches in the modern sense of the word. The description of the statute of mortmain (p. 36) is too vague and there should have been a fuller discussion of Cluniac monasticism. Two niggling points: the map (p. 5) shows Pontefract and Monk Bretton as Augustinian houses, though they are correctly identified as Cluniac in the text; accents are consistently omitted from French names, e.g. Cîteaux, Prémontr .

Nevertheless, this publication is to be welcomed. In providing a thoughtful overview of monastic life in medieval Yorkshire it will stimulate the interest of many readers with an interest in monasticism and the region.

BRIAN GOLDING

JOSEPH A. GRIBBIN, *The Premonstratensian order in late medieval England* (Boydell, 2001). xviii + 283 pp. 5 tables; 10 plates; 4 maps. £45.

It is now fifty years since H. M. Colvin produced the first full-length study of the English Premonstratensians (*The White Canons in England*, Oxford, 1951). Since then interest in the order has been modest, with editions of cartularies, such as those of Dale and Leiston, and articles on individual abbeys and aspects of Premonstratensian culture. Joseph Gribbin's *The Premonstratensian order in late medieval England* is therefore a welcome addition to the historiography of the order. His study is based largely on the visitation returns of Richard Redman, who became a white canon at the Westmorland abbey of Shap, quickly rose to be abbot, and went on to a distinguished career as bishop (St Asaph, Exeter, Ely) and diplomat, as well as commissary-general of the Premonstratensian order, in which capacity he visited the English abbeys between 1458 and 1503. Although these returns were known to David Knowles and to H. M. Colvin, they have not until now received the full attention they merit as the most detailed extant record of the visitations of an entire order. Gribbin analyzes the contents of the returns in Chapters Two and Three, and then uses them as a springboard for further discussion of the liturgy (Chapter Four) and learning, including the evidence for manuscripts, books and libraries (Chapter Five). He concludes with an account of the far from typical Richard Redman and his career.

Gribbin has produced a detailed account of aspects of one of the less well studied religious orders in England, and his discussion of the often neglected liturgy – which was at the heart of the monastic existence – is sensitive. Despite the title, however, the book is less a comprehensive history of the order in late medieval England than an account of the internal life of its abbeys. Thus, apart from where it impinges on the performance of the liturgy, there is no discussion of relations with patrons and benefactors, and apart from the evidence of the visitation returns with regard to the maintenance of properties, the adequacy of livestock and grain, and the financial management by the abbot (pp. 82–8), there is no discussion of their economy.

Despite this, the book is an important addition to the literature on the religious orders in late medieval England.

JANET BURTON

ROBERT BEARMAN, *Compton Verney: a history of the house and its owners* (Shakespeare Birthplace Trust, 2000). 188 pp. 59 plates; 16 figs. £14.99.

The curious history of the Verney family and their seat is well matched by the curiosities of this interesting book. Generated by the papers given at a conference organized by the Shakespeare Birthplace Trust (because the Willoughby de Broke family papers happen to have found their way into that Trust's record office) in the Compton Verney house (now owned by the Moores Foundation established by the Littlewoods Pools family), the chapters devoted to the house and the Verneys are flanked by a splendid piece by Christopher Dyer on the time before there were any Verneys, any house, and any place called Compton Verney, and a tailpiece on the time after the Verneys when the house was saved in the nick of time from becoming an upmarket housing estate with its own opera house. In between there are chapters of specialist interest, on the architectural history of the house, and on its landscape history – in a typically arrogant eighteenth-century aristocratic gesture, the medieval church was swept away at Capability Brown's suggestion because it interfered with the view – while a piece on the detached Chesterton estate is thrown in because it contains an eccentric seventeenth-century windmill and was acquired by the Verneys through marriage in 1746. The chapter on the 19th Lord Willoughby de Broke, the 'Diehard' of resistance to the 1911 Parliament Bill and subsequently to Irish Home Rule and the only Verney known to national history, is of wider interest, and what is more it is a highly enjoyable example of Roland Quinault's polished technique of witty and informative political biography. The passionate foxhunter and defender of the hereditary peerage was, Quinault reveals, also a supporter of women's suffrage and, although an impoverished landowner, the builder of St Martin's theatre, which opened in 1916. The only contribution of more than passing interest for agricultural historians, however, is that by Christopher Dyer, which is the most substantial chapter in the book. It is an absorbing reconstruction, from archaeological, cartographic, and documentary sources of the story of the lords and peasants of Compton Murdak and their impact on the landscape, in the three or four hundred years before the Verneys arrived on the scene in 1435. Although its attention to the *minutiae* of topographical detail will fascinate highly local antiquaries, this is of much more than local significance, not least in bringing the peasantry into the foreground of the action in medieval agriculture. By voting with their feet and moving away from Compton Murdak from the later fourteenth century, they were as responsible as the manorial lords for making it into a deserted village.

F. M. L. THOMPSON

ANGUS J. L. WINCHESTER, *The harvest of the hills. Rural life in northern England and the Scottish Borders, 1400–1700* (Edinburgh UP, 2000). xiv + 194 p. 9 tables; 50 figs. £19.95.

Winchester's excellent study of the rural society and economy of highland north-west England and the Borders has a relevance which reaches far outside the limited zone it discusses. It is to be commended as one of the few studies to use series of early modern court rolls to show not only how the court acted as an expression of agrarian self-regulation, but also for the wealth of information they contain on agrarian practices. Winchester shows how the upland 'wastes' were exploited, and this makes his book relevant to historians interested in other areas of low intensity exploitation in 'marginal' areas lying outside purely arable zones, whether heathlands, fenlands or forests. A geographer by training, Winchester has a sharp eye for spatial relationships, for the varying effects of soil types and climate on agriculture and for landscape. The sense of the visual also extends to the photographs: this is a well illustrated and attractive book. It is also affordably priced.

The first chapter introduces the landscapes and ecology of the upland zone. It also makes the useful distinction between 'closed forests and chases', where seigniorial rights predominated and the land was exploited by vaccaries (which developed into hamlets or single farms), and 'open forests' where lords allowed and perhaps encouraged nucleated settlement by peasant communities. Winchester does not relate this to the economic preferences of high medieval landlords, but it may be suggested that property rights and the decisions of landlords lie at the basis of this cleavage. Chapter One also introduces the character of the pastoral economy, but here a little more on the extent of grain growing and its decline would have been helpful: the uplands were not merely pastoral in 1400, although they mostly were by 1700.

The major substance of Chapter Two concerns the working of the manorial courts, an account based on the discussion of thirty surviving sets of records drawn from the Yorkshire Dales, the Lake District and the northern Pennines. The aspect of the activities of the courts discussed is mostly the regulation of the agrarian regime – there is nothing on the transmission of property, making this a partial account – but it is none the less an indispensable addition to the literature. So too is the account of the more informal and local 'by-laws' which met at township level and whose ordinances were ratified by the higher courts. Their purpose was to encourage the keeping of 'good neighbourhood'. Chapter Three is an account of the hill farming year, but there is much here on the physical layout of the

landscape, of the head dyke, the development of field boundaries within the arable of upland communities and the use of upland pastures. Chapter Four, 'Summer pasture on the fells', contains a very helpful discussion of the basis by which access to commons was controlled. Again, this turns out to be a less than simple matter but geographically conditioned, with the law of levancy and couchancy predominating in the Lakes and northern Pennines and stints in the Yorkshire Dales. Shielings were also geographically restricted, surviving only in the Borders and the very northern Pennines in the late sixteenth and early seventeenth century and probably not even here by 1650. The annual migration to and fro to shielings is shown to have been a highly disciplined activity, regulated by townships. Chapter Five shows how the commons were actually grazed. Again, the regulation of commons by communities of commoners is shown by such issues as the slow extirpation of goats from commons and the common herding of animals; and this is the place to turn for an account of the various methods (including ear mutilation) used to mark sheep. Chapter Six is an account of the other products of the uplands; of wood, peat and turf, heath and bracken, and stone and coal, again showing how access to these resources was communally controlled. As in all of the previous chapters there is an acute eye for rewarding detail.

The conclusion draws all the detail together. Winchester shows (Table 7.1) how the management and utilization of the upland fells never stood still: he is far too good a historian to hold otherwise. He then relates the behaviour of the manor courts to the seven principles elucidated by Ostrom for the sustainability of common resources. Winchester holds that the courts do meet her criteria for the management of a 'common pool resource'. Yet what he cannot know is the degree to which the commons underwent environmental degradation in the early modern period. Obviously peat and turf was removed as fuel. Was grazing really so well regulated? What Winchester does show, although I would give much more weight to the matter, is that the commons were progressively under attack in the century after 1540, certainly in Craven and the upper Eden valley, and I would have thought more generally. The dynamics of this process differed from place to place. In some locations it was driven by lords for their own advantage; in others, and I suspect often as a response to lordly attrition elsewhere, by the commoners themselves. Where manorial courts may well have been capable of regulating the usage of the common, the whole system was unbalanced by lords. Where manorial courts survived as the custodian of the common resource, it may yet be found that their continued existence reflects a low pressure

landlord regime. Where lords had the upper hand, there were perhaps no commons except for the very upland fells left for the courts to regulate. Enclosure is dealt with, but rather lightly. A worked account of how a manor court reacted to enclosure would have been helpful. And even where commons survived to 1700, they had mostly gone by 1800. So whilst I accept that the courts could well have satisfied Ostrom's principles, I would be much less sanguine about the survival of commons overall, even before the enclosure movement of the eighteenth century. The strength of this excellent study is in its exploitation of the court roll evidence, but this may also be its weakness.

R. W. HOYLE

CHRISTINE M. NEWMAN, *Late medieval Northallerton: a small market town and its hinterland, c. 1470-1540* (Stamford: Shaun Tyas Publishing, 1999). xviii + 174 pp. 15 tables: 4 illus; 2 maps. £19.95

Studies of small towns at the end of the Middle Ages are not two a penny. Newman's study of late medieval Northallerton promises to be rather more than a study of a town, for this is a study of a town and the seven rural manors which together formed an estate of the Bishop of Durham's in the North Riding. The records of the Bishop's estate jurisdiction and the judicial records of the borough and liberty are the chief sources underpinning the book. When the episcopal records run out in the 1540s, the book ends. Whilst the date range of the book, spanning the arbitrary divide between medieval and early modern is to be welcomed, it is determined by the records. And apart from the episcopal records, there is very little else to call upon: this being Yorkshire, even the subsidy materials are pretty poor. So the book is based on a close and careful reading of the court rolls: in particular the debt pleadings in the borough court and court baron are used to reconstruct the economic life of the town. Overall, one gains the impression that Northallerton is not really as well-documented as it needs to be to support a really first-rate study and Dr Newman is sometimes reduced to making a little out of not very much at all.

As one might expect from the nature of the sources, the book contains full descriptions of the judicial and administrative arrangements for Northallerton and office holding within the episcopal administration of Northallerton and Allertonshire. Chapter Three discusses the systems of land tenancy prevailing on the episcopal estates. This confirms the relative unimportance of the exact terms of tenure in the first years of the sixteenth century. The reason for issuing leases to demesne tenants in 1496 appears to have been to oblige the tenants to do military service for the bishop: this is an anecdote which

could usefully be explored elsewhere. There was also a subterranean struggle over the rate of fines, with an order in the Halmote in 1501 that customary tenants should pay 1s. od. for every bovat or cottage. In fact, some tenants paid more than this and one wonders whether this was an attempt by the tenants to hold down the rate of fines. More could have been made of this, but in general, apart from a burst of energy in the 1490s (when the estate invested in buildings to a degree), the administration of the estate seems lethargic. Newman perhaps explains why in Chapter Four with its stress on the lack of vitality in the local economy. Using pleas of debt, she suggests particular difficulties in the mid-1490s running into the first decade of the sixteenth century. On her assessment, the depression continued past mid-century. Chapter Five considers the retail functions of the town. In 1555 Northallerton secured the grant of a fortnightly cattle and horse market to be held through the summer months, and whilst this seems to have been highly successful by the end of the century, there seems to have been nothing equivalent before 1540: retailing, as described by Newman, was essentially conducted within a local frame. One would like to know which came first, the revival in the town's economy or the cattle market. This chapter ought to be noted by anyone interested in the economic state of England at the end of the fifteenth century. Chapter Six deals with the social problems of Northallerton (where vagrancy, disorderly women and an apparent influx of Scots are shown to have preoccupied the good people of the town). Newman's book presents as full a picture as possible based on a very careful reading of a narrow range of sources. It is a rather telescoped study, operating over a period of no more than half a century, and it is unfortunate that on its own assessment, the crucial period of revival in the urban and rural economies lies outside the range of the available documentation. None of this detracts from Newman's achievement. This is as good a study of a second rank northern town as we are ever likely to have and for this Dr Newman and her sponsors, the ESRC, are to be thanked.

R. W. HOYLE

T. C. SMOUT, *Nature contested. Environmental history in Scotland and northern England since 1600* (Edinburgh UP, 2000). xiii + 210 pp. Illus. £14.99.

Nature contested does not seek to be a comprehensive environmental history of Scotland and the north of England, though some will undoubtedly use it as such, but simply a study in environmental history. It is based on the Ford Lectures that Christopher Smout gave at Oxford in 1999. His argument is based around the suggestion that the countryside was shaped by the twin values of

use and delight, the one seeing the countryside as a set of resources that should be exploited to their maximum market potential, Carlyle's 'war on undeveloped nature', and the other seeing it in terms of appreciation and enjoyment. Using key habitats, Smout explores the emergence of these ideas over the seventeenth and eighteenth centuries, arguing that whilst they sat comfortably enough with each other at the outset, they came into increasing conflict over the nineteenth and especially the twentieth century. Drawing on a range of literary and philosophical writing to do so, he is as concerned with tracing the shifts in attitude and expectation that underpinned the notions of use and delight as with the physical and institutional changes produced by them on the ground.

The habitat-based chapters begin with one on woodland. Smout's views on the mythical basis of a late surviving great wood of Caledon are now well-known. They are worked through here in detail. A significant proportion of the Highland forest cover, perhaps as much as 50 per cent, had probably disappeared in prehistory. A further 30 to 35 per cent disappeared during the medieval period, though more to do with the ordinary needs of farming communities than with the excessive or concentrated demands of the Norse. By 1500, the point at which its pioneer clearance was thought by some to have begun in earnest as both the ironmasters and Cumberland's troops cleared indiscriminately, barely 10 to 15 per cent of the Highlands was actually under forest. Smout adds much that is fresh to the argument here, especially about what happened after 1500. He details, for example, how changes in the farm economy affected woodland, with over-grazing and clearance of wood removing what had been a vital source of extra winter feed. He also emphasizes how those often accused of destroying the great wood, notably the ironmasters and tanners, were actually responsible for managing it in a better, more sustainable way.

One of the strengths of the book is that it treats environment in a rounded way. This is demonstrated by his chapter on soils. Admittedly, Scotland has seen more human impact on its soils than other parts of Britain, and scientists like D. Davidson and I. Simpson have done much to research this impact, but there is still much in Smout's discussion that will be of wider interest. In particular, his finely worked review of changes in key nutrients like nitrogen and phosphorus will be of interest to anyone working on the recent history of farming, as will his discussion of the use of biocides. The chapter on wetlands has much to say about the drainage of specific areas like the Humber valley, though more might have been made of the considerable ecological impact of ordinary field drainage, particularly in areas like the

Merse. As with other chapters, Smout uses changes in resident bird populations to capture the impoverishment of these habitats through improvement. Along with that on woodlands, the chapter on uplands is possibly the most valuable in the book. It succeeds because of the wide range of material that Smout brings together in a sharply-focused way, relating changes in stock husbandry to adjustments or responses in vegetation. As with soils, one is particularly impressed by how well historical data has been blended with modern ecological research.

The final chapter deals with how those who delight in the countryside came to be organized as action groups, from the Nature Conservancy Council and its modern day successors to institutions or organizations like the National Trust and RSPB. Smout uses his discussion to draw out the modern-day tensions between use and delight. His own involvement in the conservation debate does not leave him wholly optimistic about how easy it will be to resolve these tensions. However, he is clear about the direction in which we should seek their better accommodation within the same countryside. Building on ideas that he touches on throughout the book, he argues for two guiding principles. First, he believes that the town has some right of enjoyment to the countryside under what he calls 'the public nature of private property' rights. These rights, of course, have now been advanced by the access afforded under the new Crow Act (2000). Second, he believes that conservation should seek to broaden its vision beyond the site-based approach of the past 50 years and address the countryside at large, reuniting use and delight 'seamlessly and quickly'. Since he finished his text, most would agree that the outbreak of foot and mouth has strengthened the case for this, making it imperative that the modern farmer takes on the wider role of land manager.

ROBERT A. DODGSHON

BERNARD MORRIS (ed.), *Gabriel Powell's survey of Gower, 1764* (The Gower Society, 2000). xxi + 233 pp. Illus. £29 incl. p&xp from Dr Margaret Jones, 'Llwyndomen', Craigcefnparc, Swansea, SA6 5RS.

There can be few historians with interests in the Swansea region who have not benefited in some way from the researches of Bernard Morris, the former Swansea city estate agent, whose involvement with local history and archaeology stretches back over 40 years. This is the third in a series of volumes, all written or edited by Morris, and handsomely published by the West Glamorgan County Archive Service or the Gower Society. The earlier volumes cover *The houses of Singleton* (1995) and *Old Gower farmhouses* (1998). The new volume, *Gabriel*

Powell's survey of Gower 1764, includes a transcript of a text which has been widely used by Welsh historians, but has hitherto been available only in the original, or as a late-nineteenth-century manuscript copy. In addition to the text itself, Morris has provided a 36-page introduction, together with a glossary of legal and technical terms. The introduction includes a useful summary of the history of the lordship of Gower, which covered both the Gower peninsula and an area of approximately equal size, extending more than thirteen miles to the north of Swansea. Morris also gives the background to the 1764 survey, a brief history of the lordship and its manors and tenants, and an interesting account of the life and work of Gabriel Powell, the steward of the lordship, who compiled the survey on behalf of the lord, the infant Henry, Duke of Beaufort.

Those historians who are accustomed to using English manorial surveys will find that this is a somewhat curious document. Most surveys date from the sixteenth and seventeenth centuries, and they were compiled from information provided by the tenants of the manor at a special court, the court of survey. The 1764 Survey of Gower was, however, made from 'several antient and authentick papers, and the observations and experience' gained by Gabriel Powell and his late father (also called Gabriel Powell) over a period of 63 years. In fact, as Morris points out, the 1764 survey is very much a product of its own time. It represents both a belated attempt to stem the tide of encroachments on the property and rights of the Dukes of Beaufort and their ancestors, and a response to the changing circumstances of the mid-eighteenth century, when the face of the northern section of the lordship was being transformed as a result of industrial development.

The text of the 1764 survey begins with a chronological list of the history of the lords of Gower, followed by a description of the boundaries of the lordship or seignory, and a list of the manors within the former marcher lordship, with details of their bounds and holders. Information on the officers of the seignory, the manor courts, and the rights claimed by the lord is given, together with several lists of tenants, with descriptions of their holdings. The survey includes much raw material for studies of the landowners of eighteenth-century Wales; of the size of holdings and the conditions on which they were held; and on the use of the enclosed lands and also of the commons which are still today such an important feature of the Gower landscape.

There is potentially much in this volume for students of place names and also for family historians. The lack of indexes to either names or places is therefore particularly to be regretted.

JOANNA MARTIN

JACQUELINE COOPER, *The well-ordered town. A story of Saffron Walden, Essex, 1792-1862* (Cooper Publications, 2000). 288 pp. 5 tables; 38 illus; 3 maps. £14.99 incl. p&p from Cooper Publications, 24 Pelham Road, Clavering, Saffron Walden, Essex CB11 4PQ.

This book is a timely reminder of the darker side of life in the English countryside. In twelve sharply written and well illustrated chapters, Cooper systematically dispels the myth of the rural idyll so vividly sustained by the beguiling images of towns and villages of north-west Essex, of which Saffron Walden is a prime example. Image, she explains, was also a concern of the Walden worthies who vigorously promoted the idea of a 'well-ordered town'. The validity of this claim is the theme of the book. The period starts in 1792 when Tom Paine's *Rights of man* was banned from the local bookshop and ends in 1862 when Solomon Barton, the town missionary, engaged to proselytize the disaffected poor, leaves under a cloud. The extracts from Solomon's journal for 1861-2, included as a postscript, effectively destroy any residual nostalgia for a system which relied on a benevolent landowner and local philanthropy.

Cooper organizes her book in two parts: 'Challenges' and 'Responses'. The first three chapters, assisted by three maps, set the town firmly in its regional and national context. We meet Lord Braybrooke of Audley End, 'improving' his estate, distributing prizes at his agricultural show, yet resisting all attempts to link the town to the transport network, thereby directly contributing to the decline of local businesses and much needed jobs. The next four chapters deal with the fallout: poverty, crime and rural unrest. As ever, the initiatives at Saffron Walden demonstrate the flexibility of the old poor law. The new poor law met with fierce resistance, inmates burning down the old workhouse. By 1838, the abolition of outdoor relief and the breaking up of families ensured that 40 per cent of the inmates were deserted wives and children. Cooper links this policy to the increase in crime, particularly poaching and incendiarism, and the growing alienation of large sections of rural society.

Some of the most original material concerns the 'Responses', particularly those generated by working people, the friendly societies and primitive methodism, mercifully free of elite control and an elite moral agenda. Nevertheless, Braybrooke receives praise for initiating the allotments scheme, an idea well before its time. A major achievement has been the gathering together of local archives housed in different locations, notably the records of the town mission lost for 30 years. The bibliography includes a fully referenced list of sources, citing locations, and suggestions for future lines of research.

ELIZABETH GRIFFITHS

DIAN BLAWER, *John Peck of Parson Drove: an exceptional fenman* (Wisbech and Fenland Museum, 1997). 31 pp. Illus. DIAN BLAWER, *The trade of a farmer: John Peck of Parson Drove* (Wisbech and Fenland Museum, 2000). 41 pp. Illus. £3.00 each incl. p&p, from Wisbech and Fenland Museum, Museum Square, Wisbech, Cambs., PE13 1ES.

These nicely produced A5 booklets, published for the local reader, provide a detailed picture of farming and rural life in the north Cambridgeshire fens during the first half of the nineteenth century. The principal sources are John Peck's diaries for the years 1814-51, which are quoted extensively, especially in the second booklet. Peck was a substantial farmer of about 350-400 acres. Only late in life did he own his land, preferring to lease land on an annual basis in blocks scattered over a six-mile spread. In 1831 there were ten such blocks, belonging to ten different landlords. Not for him the ring-fenced farm, which he could easily walk over. Instead he spent a lot of time in the saddle and had to balance the uncertainties of short-term tenancies against long-term improvements.

The first booklet deals broadly with Peck as a man of many parts. As well as his farming, it covers such roles as constable, surveyor of the highways, census enumerator, land valuer, commissioner of income tax, and his responsibility for (old) poor law accounts. In particular he was the driving force behind considerable improvements in local fen drainage, and this booklet exemplifies the widespread Fenland experience that early attempts usually needed substantial improvements in the nineteenth century.

The second booklet concentrates on a more purely agricultural perspective, having sections devoted to the weather, labour management, equipment, livestock, crops, and marketing. Peck was an outstanding observer of his scene and his times, and relates his local observations to national events and trends. He read widely and drew ideas and information from going frequently to meetings and markets.

Both booklets would have been improved by the inclusion of a map illustrating the unusually scattered nature of Peck's holdings, and the complex changes he brought about in fen drainage. Such a map could also have helped to explain the relationship between Peck's Inham Hall Farm in Parson Drove and the Inham Hall (sic) located by current Ordnance Survey maps three miles away in the village of Wisbech St Mary.

DENNIS MILLS

HEATHER WILLIAMS, *The lure of the land. A century of education at Harper Adams* (Harper Adams University College, 2000). x + 370 pp. Illus. £22.

In comparison with many other European countries, England was slow to provide facilities for full-time agricultural education. France and Germany both had agricultural colleges by the 1820s, and Ireland by the 1840s. In England and Wales there was only the Royal Agricultural College before the last decade of the nineteenth century, and with few students and various disagreements and scandals affecting its principals and staff, it was hardly a roaring success. Then in the 1890s, with the aid of taxpayers' money, came a rapid expansion of university departments of agriculture, beginning with Bangor in 1889, rapidly followed by Newcastle, Nottingham, Reading and Wye. Almost inevitably, a century later, there has recently been a rash of celebratory college histories. The formula is now familiar: an account of the foundation, pictures of a small staff and few students all dressed in what now appear to be amazingly formal clothes, descriptions of hard times between the wars and training land girls in World War II, followed by twenty years of agricultural expansion and then another twenty of educational expansion, and ending with the difficulties of the 1990s and a prospectus of the wide range of courses into which the place has now diversified, perhaps enlivened with some account of the idiosyncrasies, successes and difficulties of the staff, especially the principals, all interspersed with the memories of past students.

This history of what is now Harper Adams University College at Edgmond in Shropshire is no exception. Thomas Harper Adams was born in 1817, the youngest of three brothers, each of whom inherited land. As a result of various family arguments all of this land eventually came into the ownership of Harper Adams, who had no children himself, was known as a miser and misanthropist and whose mental health was further affected by a stroke a few years before his death in 1892. Why he chose to leave his money as he did remains a mystery, except that the desirability of expanding agricultural education was much discussed at the time, and his solicitor, Charles Liddle, was a prominent member of the committee set up to consider agricultural education in the county. Harper Adams's niece, who had been disinherited by her father and continued to make claims upon the estate now owned by her uncle, unsurprisingly believed Liddle to be too influential. When the legal arguments were eventually sorted out, the trustees were left with £45,496 and 178 acres of land on which to establish a college for teaching 'practical and theoretical agriculture'. The college opened in 1901 with a handful of students and six academic staff under the principal, Percy Hedworth Foulkes.

Since there are now over 1600 students at Harper Adams, and the estate extends to 700 acres, the venture must be seen as a success, at least in terms of survival and expansion. The structure of the book implies that the credit for this lies with the principals, for the periods covered in the various chapters are largely coincidental with their periods of office. Among them are three heroes – principals Crowther, Price, and Harris – and three others who, if not quite villains, at least failed to match the achievements of the others. Dr Williams is very frank about the shortcomings of principal Kenney, and much less so (she simply reproduces a governors' press release) about the reasons for the departure of Mr McConnell, who lasted less than two years in the mid-1990s. This raises some interesting questions about the reasons for success in agricultural colleges: does it depend on the production of employable students, or relevant and innovative research; should teaching and outside advisory work be integrated or separated; how important is the influence of government policy; or is success simply determined by the ability of the principal to inspire or frighten staff and students to realize their potential and then make sure that the rest of the world is aware of their achievements? Although the book does not tackle these questions directly, it provides plenty of evidence for anyone thinking about them. The quality of Harper Adams students appears to have been more widely recognized than its research, advisory work was clearly vital to its survival between the Wars, and the hero principals were all good leaders and effective at maintaining the image of the place – Price, indeed, is described as 'a showman'. While former students will probably form the main readership for this well-illustrated book, historians of twentieth-century agriculture too will find it useful, especially as a source of evidence, although they will not be helped by the idiosyncratic referencing system.

PAUL BRASSLEY

Elsewhere and General

DANIEL ZOHARY AND MARIA HOPF, *Domestication of plants in the old world: the origin and spread of cultivated plants in west Asia, Europe and the Nile valley* (OUP, Third edition, 2000). xi + 316 pp. 5 tables; 45 figs; 25 maps. £22.95.

The scientific study of plant domestication can be seen in retrospect to date from the publication in 1882 of Alphonse de Candolle's *Origine des plantes cultivées*. But despite the acquisition in recent decades of much new botanical and archaeological data on the evolution and early cultivation of crops, the evidence available worldwide remains geographically and chronologically sparse and uneven. Botanical investigation has been concerned

largely with the ancestry of the staple crops of modern agriculture, particularly the major cereals, and archaeological investigation of the beginnings of agriculture has concentrated on regions in which early civilizations arose.

Archaeobotanical research on agricultural origins has focused particularly on the south-west Asian 'fertile crescent' which, together with those parts of Europe, central Asia and northern Africa to which the southwest Asian crop assemblage spread in neolithic times, is the only region in the world for which a comprehensive account can be given of the initial domestication and early spread of crops. Fifteen years ago, in the first edition of their book, Zohary and Hopf could already marshal sufficient evidence to write such an account, and the fact that it has reached a third edition reflects both its welcome by the scientific community and the continuing flow of new archaeobotanical data.

At first glance, the reference to the old world in the title appears to be a misnomer, because the book lacks systematic discussion of crops indigenous to India, China and Africa (Egypt excepted), although some plants that were domesticated in southern and eastern Asia are mentioned (on p. 251) as late prehistoric and early historic additions to the southwest Asian/Mediterranean crop assemblage. The book's geographical scope is more accurately stated in the subtitle, and the authors' decision to limit themselves to western Eurasia and north-eastern Africa is justified by the cardinal importance of the region in the emergence of agriculture, by its unique richness in archaeological sites from which crop remains have been recovered, identified and accurately dated, and by Zohary and Hopf's own expertise in the systematics and archaeobotany of, respectively, south-west Asia and Europe.

This edition adheres closely to the structure of its predecessors. After an introductory review of sources of evidence, there are chapters on cereals, pulses, oil and fibre crops, fruit trees and nuts, vegetables and tubers, condiments and dye crops, followed by a country-by-country summary of the plant remains retrieved from representative neolithic and bronze age sites, a concluding chapter, five maps showing site locations, and a chronological chart. The text is some 20 per cent longer than the first edition, owing partly to the addition of new data on some of the main crops and partly to the inclusion of several minor food crops and dye plants previously excluded. The increase is welcome, but it is at the expense of the chapter in the first and second editions on 'fruit collected from the wild'. This omission is regrettable, because archaeobotanists are increasingly turning their attention to the role of wild food-plants in both pre-agrarian mesolithic and early agrarian neolithic

subsistence. If in due course there is a fourth edition, it is to be hoped that the authors might persuade OUP to restore – and even expand – this valuable chapter.

In this third edition the authors present systematically and succinctly a mass of information on the ancestry, domestication and spread of the large assemblage of crops that originated in south-west Asia during neolithic, chalcolithic and bronze age times, and spread west through Europe and the Mediterranean and east into central and southern Asia – a latitudinal expansion unmatched in scale and crop diversity by any other prehistoric agricultural system. All those who are interested in the transition from foraging to farming and the consequent rise of urban civilization in western Eurasia are in debt to Zohary and Hopf for once again providing us with an up-to-date and indispensable account of the crops that provided the foundation for this transformation of human society.

DAVID R. HARRIS

T. DOUGLAS PRICE (ed.), *Europe's first farmers* (CUP, 2000). xv + 395 pp. 4 tables; 67 illus. £55 (hbk); £19.95 (pbk).

The question of how agriculture originated and spread has been a *cause célèbre* among archaeologists since the 1930s when the famous prehistorian V. Gordon Childe formulated his concept of the neolithic revolution. In recent decades the question has been addressed at a succession of international conferences, and numerous field projects have yielded new evidence on the transition to agriculture in many parts of the world—in particular south-west Asia where Childe's neolithic revolution took place and from which he envisaged the new way of life spreading westward across Europe by a process of population expansion and agricultural colonization.

Childe's diffusionary hypothesis has exerted a powerful and enduring influence on archaeologists. Although modified by new evidence, it is still championed by many scholars, for example Cavalli-Sforza and Renfrew who have recently found in new genetic and linguistic data support for the idea that expanding neolithic populations introduced both agriculture and Indo-European languages to Europe. But it has also been challenged, particularly by prehistorians studying the mesolithic and early neolithic archaeology of northern and north-western Europe who give greater weight to the 'indigenous adoption' of agriculture by resident mesolithic hunter-gatherers.

The editor of *Europe's first farmers* is a leading proponent of this revisionist position. He believes that the spread of agriculture through Europe was the result more of the piecemeal adoption of elements of the southwest Asian neolithic 'package' (crops, domestic livestock, pottery, ground-stone tools) by mesolithic populations than of colonization by neolithic farmers. More generally, he

argues that socio-economic and ideological factors deserve more, and environmental factors less, emphasis in explanations of the origins and spread of agriculture. He suggests that 'a new synthesis' is now emerging from these 'non-traditional perspectives', which it is the aim of this volume to present. The book grew out of a meeting of specialists in European prehistory held in 1995, but the papers given then were later extensively revised, as is evident from the many more recent publications to which the authors refer. The result is the most up-to-date and comprehensive account of the beginnings of agriculture in Europe currently available.

In his introduction, Price contrasts 'the generally accepted views of the transition to agriculture in Europe' with 'more recent data and perspectives' and provides a valuable region-by-region overview that reflects these new perspectives as well as the results of much recent fieldwork. It is presented in a geographical and chronological sequence from the first appearance of farmers in Greece around 7000 BC to the arrival of agriculture in Britain and Scandinavia after 4000 BC (these are calibrated radiocarbon dates which, most helpfully, are used throughout the volume, thus enabling the spread of agriculture to be tracked in calendar years).

Nine regional chapters follow the introduction. Starting with southeastern Europe – which Ruth Tringham characterizes as a culturally complex mosaic, in contrast to Childe's concept of the Balkans as a bridge between the Near East and Europe – the sequence continues with a chapter by Marek Zvelebil and Malcolm Lillie on eastern Europe, three chapters on Mediterranean Europe by William Barnett, Didier Binder and João Zilhão, two on south-central and north-central Europe by Michael Jochim and Peter Bogucki, one on Ireland and Britain by Peter Woodman, and one on northern Europe by Douglas Price. Justice cannot be done to each of these contributions in a short review, but collectively they contain an abundance of new data and fresh thinking. Readers of the *Agricultural History Review* may be particularly interested in Woodman's up-to-date assessment of the (sparse) evidence for how farming spread through Britain and Ireland and his critical examination of how radiocarbon dates have been, and should be, used to date the transition to agriculture there.

In the final chapter the editor returns to the two overarching questions of how and why agriculture spread. He posits them as 'colonization v indigenous adoption', and 'causality and the neolithic', and concludes that whilst the how question has been largely answered, 'why agriculture spread across Europe remains unresolved'. Although the latter question is left open, the emphasis in *Europe's first farmers* is firmly on the role of social and ideological factors 'internal to human society'

in the transition to agriculture, with 'climate, environment and population growth' accorded only 'a minor role, if any', in the process. Whether readers will be convinced that a 'new synthesis' has indeed been achieved will depend on where they stand in the debate about causality; but there is no doubt that this volume substantially advances our understanding of the transition to agriculture in Europe. It also contains many ideas that are relevant to the study of early agriculture elsewhere in the world, and is a most welcome addition to the already large literature on the subject.

DAVID R. HARRIS

ROSEMARY L. HOPCROFT, *Regions, institutions and agrarian change in European history* (University of Michigan Press, 1999). xiv + 272 pp. 4 figs; 16 maps; 1 photograph. £36.

Rosemary Hopcroft's book has a simple message. Europe exhibits contrasting institutional geographies. In some regions, local institutions offered clear and exclusive property rights in land. Here enclosed field systems and less-communal open field systems reduced the costs of production and exchange, encouraging development. In other regions, 'local institutions that provided uncertain property rights in land and inhibited individual economic freedom produced communal open field systems' (p. 8). Communal field systems slowed development by increasing the costs of production and exchange.

The argument is laid out in three introductory chapters, the last of which roots the study firmly within the intellectual terrain of the new institutional economics. As the author explains, NIE extends the neoclassical premise that people generally prefer more wealth to less by factoring transaction costs (and hence the institutional structures which give rise to them) into the constraints of the neoclassical model. The five chapters which follow present country by country case studies of rural institutions and agrarian change in England, the Netherlands, France, the German lands and Sweden. In all cases, the message is the same: less communal regions favoured development, other things being equal. If more communal, open-field areas came to the fore (as did the grain lands of the Paris basin) it was only because other things were not equal. In France, the intrinsically-advantaged less communal regions of the south and west suffered relatively unfavourable ecologies and relatively poor market access. A concluding chapter reiterates the argument.

As the author acknowledges, the book is at odds with both Robert Brenner's marxian analysis of agrarian change and the technology-oriented modernization theories propounded by Rostow and others. But it shares with them the propensity to prompt dissent. I found

myself resisting Hopcroft's argument at several points. First, I sense that Hopcroft might be reluctant to accept that a successful capitalism requires that freedom be tempered by a measure of communal constraint. This may be why she says next to nothing about the communal life and institutions of areas she characterizes as non or less communal. The reader will search in vain for any reference to van Zanden on the *marken* of the eastern Netherlands, or to a discussion of the role of commons in the agrarian life of the uplands and of forest and fen margins more generally. Second, her path-dependency argument posits a direct progression from agrarian to industrial 'development' without at any point analyzing the nature of that development. The most 'developed' agricultural regions became industrial. There is no room here for the proto-industrialization notions of Mendels, Medick, Thirsk and others which explicitly root early industrial by-employments in the work regimes and inheritance customs of a not particularly advanced pastoralism. Third, the progressive qualities of open field arable farming are not acknowledged, though demonstrated now by several authors. In the open fields, Hopcroft sees only the burden of higher transaction costs, but without offering much in the way of evidence. Many students of the open fields will be surprised to hear of their propensity to constrain economic inequality and with it the possibility of increased production.

The book has a pleasingly wide geographical range and an impressive bibliography. However, the author's reading seems to have been less than all-embracing. One senses that at no point have her prior preconceptions been challenged. Archival research is lacking, perhaps understandably in a study which ranges across Europe. But as a consequence the reader is often obliged to accept assertion without the support of evidence. It is to be hoped that this interesting but not wholly persuasive book might prompt a serious, archivally-focused exploration of some of the issues it raises.

JOHN R. WALTON

E. C. SPARY, *Utopia's garden. French natural history from old regime to revolution* (Chicago UP, 2000).

xv + 321 pp. 19 figs. £44.50 (hbk); £16 (pbk).

Utopia's garden is an absorbing book about the politics of natural history from the middle of the eighteenth century to the French Revolution. It focuses on the *Jardin du roi*, the Parisian botanical garden overseen for nearly half a century, from 1739 until 1788, by Georges-Louis Leclerc de Buffon. A year after Buffon's death, the Revolution swept away the systems of patronage and authority under which the *Jardin* had operated since its inception as a small physic garden under Louis XIII in 1626. Following complex manoeuvres, the Revolutionary

Convention re-organised the *Jardin* in 1793 as a *Muséum d'histoire naturelle* in the anticipation that it would play a central role in the network of self-consciously republican scientific and educational institutions established in the French capital during the 1790s. In five detailed chapters, Emma Spary shows how the naturalists who worked in the *Jardin/Muséum* sought, with considerable success, to protect and enhance their privileged position through the maelstrom of events from the 1740s to the rise of Napoleon. In so doing, she demonstrates how competing constituencies in French political life before, during and after the Revolution sought moral and intellectual legitimacy by appealing to science and the natural world.

The first three chapters focus on different aspects of the *Jardin's* history prior to the 1790s. Chapter One sets the scene by discussing Buffon's organization of the *Jardin*. Here was an institution created by an absolutist monarchy with collections and personnel that reflected the patronage, politesse and social distinctions of the age. Buffon's *Jardin* was a public scientific space that sought to 'naturalize' the social, cultural and political structures of the old regime; 'a site at which disciplining people and disciplining specimens became similar problems' (p. 47). In her second chapter, 'Acting at a distance', Spary considers the correspondence and seed-exchange networks established by André Thouin, the *Jardin's* gardener from 1763 to 1794. As her title suggests, Spary's analysis of Thouin's attempts to maintain the old regime systems of patronage and favour into the early period of the Revolution is a spirited attempt to historicize the otherwise abstract model of actor-network relationships developed by Bruno Latour. Chapter Three, 'Naturalizing the tree of liberty', examines how the naturalists who were to remain at the *Jardin* after Buffon's death (including long-time accomplice Louis-Jean-Marie Daubenton and younger scientists such as Antoine-Laurent de Jussieu) sought to re-cast Buffon's natural history during the 1780s as a radical commentary on the relationship between human beings and the natural world. The objective was a new science that offered the prospect of transforming both nature and society.

The final two chapters deal with the *Jardin's* fate in the aftermath of the Revolution. The fourth chapter, 'Patronage, community and power', details the attempts by the *Jardin's* naturalists to re-build networks of support during the uncertain years in the early 1790s when older forms of patronage had collapsed and before new ones had emerged. The final (and best) chapter in the book, 'The spectacle of nature', deals with the extraordinary debates about the establishment of the *Muséum d'histoire naturelle* and the complex relationship that developed between the naturalists who worked there and their

new Jacobin patrons. As Spary notes (p. 236), '[n]atural history ... was valuable for Jacobin deputies because it exemplified the invisible mastery of spectacle. In the small area of the *Muséum*, the naturalists were empowered to display the links between the operation of nature's laws within the universe as a whole, and the operation of those same laws within the new republic'. The trick was to achieve this without compromising the 'naturalness' of the *Muséum's* display, for the ultimate objective was to confirm that the Revolution had itself been a natural phenomenon.

Utopia's garden is easily the best study we have of the *Jardin/Muséum*, a fitting tribute to its author's painstaking research in the museum's *Bibliothèque Centrale* and in the *Archives Nationales*. Spary's command of eighteenth century published literature in natural history is commendable, the product of long hours in French, British, German and American libraries. She is no less impressive when it comes to recent scholarly research on the cultural politics of the French Revolution and on the history and sociology of Enlightenment science. Her labours have resulted in a well written and thought provoking book crammed with pleasing illustrations and scholarly footnotes (somewhere between a quarter and a half of most pages), the contents of which are usefully summarized for the serious student in a lengthy bibliography.

MIKE HEFFERNAN

ALLAN KULIKOFF, *From British peasants to colonial American farmers* (University of North Carolina Press, 2000). xiii + 484 pp. 4 maps. £44.95 (hbk); £16.95 (pbk).

Allan Kulikoff traces the history of Thomas Jefferson's late eighteenth-century small farmers back to the peasants of late medieval England in his *From British peasants to colonial American farmers*. Kulikoff begins with English (rather than British) peasants who, after the Black Death, owned land, earned high wages and enjoyed a period of unparalleled prosperity. By the early seventeenth century, these relatively propitious circumstances no longer prevailed. Rising population combined with enclosures and other 'capitalist' improvements in agriculture degraded the situation of working families. These developments explain the social problems often lamented by commentators, such as rising rates of vagabondage, poverty and crime. They also contributed to the availability of both free and unfree migrants who headed to North America in unprecedented numbers. The 'folk memory' (p. 9) of a time of better economic conditions shaped the migrants' goals. The desire to recreate the golden age of late medieval England propelled colonists onto the land and this, in turn, promoted the

independent farm families so prevalent in British North America. Kulikoff describes the new United States as sustaining 'an agrarian way of life – based on energetic labour by the entire family, subsistence production, neighbourly exchange, sale of surpluses, and movement to new lands – for more than a century' (p. 292).

The book, 292 pages of text and another 178 of notes and bibliography, is part of a larger study. Kulikoff narrates the history of the project in a rather confusing 'acknowledgements' essay. He states that a book on small farmers from 1600 to 1900 split into multiple volumes, including one on the colonial period. This then divided into two, one on demographic and social aspects and the other on identity. Though he never says so explicitly, the present volume must be the former. Other volumes are forthcoming, although perhaps not immediately. The text itself is richly descriptive of the experiences of agricultural labourers and the small farmers which some of them became. Readers will benefit from the copious documentation, particularly the one hundred page bibliography of published sources (most of them secondary) used in the book.

Kulikoff's argument, that displaced working people flocked to America to acquire land, might be rendered as a celebratory narrative of America as the land of opportunity. Frederick Jackson Turner, many nineteenth-century Whig historians and some twentieth century scholars have all embraced Kulikoff's main premise that the availability of land was of signal importance to the development of American society. Although Kulikoff's Marxist perspective gives his work an edge not present in many of these earlier works, his rapacious land speculators and his government officials unsympathetic to the plight of working families would have been familiar to Charles A. Beard. Unfortunately Kulikoff does not explicitly position his perspective in relation to that of earlier authors. Unlike many of these earlier accounts, Kulikoff's is fully aware that the aspirations of the settlers put them at odds with the just claims of native Americans. He describes in matter-of-fact fashion the expropriation of Indian lands by farmers moving west, but pays little attention to the cultural attitudes that shaped their inability to consider Indian claims on the same level as their own needs. Perhaps this omission is what comes of separating culture from social and demographic history, as Kulikoff's publication plan for the project entailed.

The book's thesis, that land hungry settlers were motivated by folk memory of the period after the Black Death, strikes this reader as unnecessary. In a society where land meant status, prosperity and some control over one's life, did working people require memories of a time when their ancestors lived more comfortably in order to wish to acquire land? If that were so, what

motivated the peasants of the late fifteenth century to seize opportunities they had not previously enjoyed? When the bulk of the population worked the land and the comfortable owned land, the desire for ownership would presumably be widespread. Under unusual conditions – such as after the Black Death or in the centuries of the conquest of North America – many could achieve this usually elusive goal. That they jumped at the chance and paid no heed to the Indians to whom the land belonged does not perhaps require so ambitious an explanation as Kulikoff offers. Most of those who were seizing the opportunities that North America afforded in the late eighteenth century were not descended from late medieval English peasants in any event. This caveat aside, readers will benefit from this wide-ranging and detailed treatment of North American social history. We should eagerly await future instalments in this project.

CARLA GARDINA PESTANA

STEVEN D. RESCHLY, *The Amish on the Iowa prairie, 1840 to 1910* (Johns Hopkins UP, 2000). x + 268 pp. Illus. \$51.

Reschly has produced a veritable treasure trove of information about the life of the Iowa Amish in the nineteenth century. Meticulous attention to detail is the great strength of this book. It is also important because it is part of a growing list of scholarly works that attempt to describe the diversity of Amish culture through time and place. The Iowa story is not the same as the more frequently described history of the Amish in Lancaster County, Pennsylvania.

The writer traces the history of the Iowa Amish from their European origins and immigration across the ocean, to their trek across the North American continent and the development of a thriving community in south-eastern Iowa. As the story unfolds he describes the development of agriculture, including the innovations in farming that were brought from Europe and made the nineteenth-century Amish among the most successful farmers in Iowa, the development of household authority patterns, relations to the state in a time of war, strategies of land acquisition and the enigma of the sleeping preacher phenomenon.

The author has clearly done his archival homework. There is a great deal of information on the day to day lives of nineteenth-century Amish people in Iowa. Using census data he describes, in detail, land values and ownership patterns, crop yields, size of household, and patterns of participation in the military. The degree of detail is both the strength and the weakness of the book. On the one hand any reader who wants to know how much butter Amish farmers produced in Johnson

County Iowa in 1870, will find the answer here. On the other hand as Reschly tries to weave these details into a history of social change among the Amish the reader may, at times, feel bogged down in the detail. At the end of an argument the reader is sometimes left wondering whether the evidence warrants the conclusion that is derived. For example, the author describes a dispute, which resulted in a portion of the Amish community refusing to participate in the semi-annual communion service in 1860. It is suggested that this conflict is linked to increasing male dominance in the Amish community. Those who refused to participate produced less butter than the partakers. A decade later the situation reverses and the non-partakers are producing more butter than those who participated in communion. His conclusion is that there is a shift in land tenure and personal wealth from one decade to the next that is directly related to an attempt to establish the slightly younger nonpartakers on farms and thus secure a stronger patriarchal foothold in this community. To reach that conclusion the reader would need to know more about the details of the rift in the community that started the conflict and much more about the actual dynamics of male and female relationships before and after 1860.

The larger problem with the book is the author's use of social theory. Reschly begins his work with a critique of the scholar's preoccupation with boundary maintenance as the key analytic strategy in describing Amish history and culture. As an alternative strategy he introduces the work of Bourdieu including his framework of repertoire of community. Bourdieu's ideas do not reappear after the first chapter and it is never entirely clear how the new framework is really anything other than a new way of describing culture. For example, in a chapter on the Amish penchant for migration as part of the repertoire of community, he suggests that 'migration is common sense, an expected behaviour, essential to what it means to be Amish' (p. 182). How is this common sense idea, that is part of a repertoire of community, a new concept that replaces the more general notion of culture? Furthermore many of the issues that are described in the book involve disputes about what it means to be Amish. Who is in, who is out is at the very heart of the conflict that led to the creation of an Old Order and an Amish-Mennonite distinction. Although the idea of boundary is never introduced, it is surely implicit in this book.

In spite of its shortcomings this book makes an important contribution to the growing literature on Amish history and culture. I recommend it to scholars and others interested in more fully understanding this fascinating subculture.

THOMAS J. MEYERS

MICHAEL BENJAMIN BERGER, *Thoreau's late career and 'The dispersion of seeds': the saunterer's synoptic vision* (Camden House, 2000). xiv + 153 pp. £35.

During the last decade of his life – between completing *Walden* in the early 1850s and dying from tuberculosis at age 44 in 1862 – Henry Thoreau walked the fields and woodlots of Concord, Massachusetts, and made copious records of his observations. He published little. For over a century much of Thoreau's late writing remained unknown except to a few devoted readers of his journal. What Emerson called his 'broken task' was largely dismissed as second-rate botanizing by scientists, and was vexing to literary scholars who felt he had lost his way.

This has changed. Today, Michael Berger can portray the 'overarching project' of Thoreau's late career as 'to describe with scientific precision and to evoke with refined literary sensibility the economy of nature, and the more sympathetic integration of the individual human perceiver – and the whole of society – into the rhythms and patterns of nature, for sane and healthy living as well as for poetic inspiration'. This mission combined rigorous scientific investigation, social improvement, and epistemological mediation. Thoreau's reputation as one of America's earliest ecologists is on the rise, and his ideas of environmental reform reached beyond the call for simplified individual economy and celebration of wildness in *Walden*. Where critics once saw a self-defeating vacillation between science and literature, scholars such as Berger now see a gaining effort to integrate empirical realism and transcendental idealism.

This transformation has been greatly abetted by the publication of Thoreau's last manuscripts, unfinished works in progress that were scattered after he died: 'The dispersion of seeds' and 'Wild fruits'. These rough drafts, whose final form cannot be known, began to give coherence to the mass of raw material accumulating in the journal. In *Thoreau's late career* Berger provides a thoughtful and well-written guide. He argues convincingly that Thoreau's detailed study of seed dispersal by wind, water, and animals placed him among the foremost students of that subject. His work was a refutation of theories of spontaneous generation, and a pointed argument against special creationism and in support of Darwin's just published 'developmental' theory of species. Beyond this, Thoreau's careful analysis of the dynamics by which oak, pine, and other woods succeeded one another looked forward to problems in ecology that are still very much alive. His flexible approach anticipated the 'post-climax' models of forest succession developed in recent decades.

Thoreau was unwilling to convey his findings in the dry language of positivist science emerging in his day. He was aware of the epistemological and rhetorical

challenges he faced in writing about nature with both scientific and poetic aims at once. By the 1850s Thoreau had moved away from the idealism of Emerson and toward an empirical realism – Thoreau was too deeply engaged with nature to regard it as the mere symbol of a higher ideal. But he remained sceptical of the ability of science to reveal all the laws of nature, and of the ability of human language to fully represent nature. He agreed with the 'nominalist' position that any human version of reality is inevitably an inadequate construction. Berger argues that Thoreau also kept a kernel of idealism: 'At the heart of Thoreau's late natural history projects is an effort to provide empirical roots for a sublimated idealism'. The higher truth that lay beyond physical nature could not be intuited by a direct leap, but only by a slow upward growth enabled by painstaking study of the secondary causes at work within nature. Here Berger very effectively presents Thoreau's image of a scarlet oak leaf (from the late essay 'Autumnal tints') as a brilliant symbiosis of the ideal deeply interpenetrated with the real.

How well Berger succeeds in placing Thoreau among the competing epistemologies of idealism, realism, and nominalism I leave to others to debate. How well Thoreau himself was succeeding at mediating between science and poetics, giving us a 'synoptic view of a natural world that both fables and mechanizes', I urge readers to decide for themselves. Michael Berger joins those scholars who are finding in the mature Thoreau a man who, far from having gone astray, was deeply engaged in an effort to discover the basis for an enduring practical and spiritual relation between a rapidly industrializing civilization and nature.

BRIAN DONAHUE

LLOYD C. IRLAND, *The Northeast's changing forest* (Harvard UP, 1999). xxiv + 401 pp. 52 tables; 39 figs. £31.50. According to a recent television 'infomercial' aired in Canada, the forested area of North America has increased by twenty per cent – 'a giant leap' – since human feet first trod the surface of the moon. The calculation may well be correct. But it lacks context. The implication of this brief, spectacular, audio-visual 'spot' is that science, human ingenuity, and corporate commitment have produced a happy outcome: more trees, rather than the reduced and ravaged forests reviled by opponents of clear-cuts and the logging of old-growth stands.

Lloyd Irland's book serves as a most useful corrective to such glib and easy inferences. Although he deals only with the northeastern United States – the six states of New England and the three that comprise the "mid-Atlantic" region (New York, New Jersey, and Pennsylvania) – Irland shows that the net area of

American forests expanded (albeit with marked regional variations) through much of the twentieth century, and that the processes by which it did so were immensely complicated. In the northeast alone the extent of the forest increased by 22 million acres between 1909 and 1997 (more than the original forested area of Maine) and every state but New Jersey recorded a net increment during this period.

In this century, as in those that preceded it, however, the forests were affected by several waves of change. Between 1880 and 1920 the expanding pulpwood industry exacted its toll on the forests. Yet the 'slow, steady decline of farming' across the northeast meant that much cleared land grew back to trees. Between 1920 and 1960, an expanding population, made newly mobile by the automobile, built cottages and camps in the northwoods, and recreational developments along the seacoasts. Then postwar prosperity and the construction of interstate highways opened far flung rural areas and urban fringes to suburban sprawl and new recreational demands. Vast areas of forest gave way to tract housing and industrial parks as other forested areas were treasured for their amenity values.

Debate, conflict, and very different landscapes were the results of such changes, and Irland does an admirable job of distilling some of the important essences of this story. His is 'a book about forests, by a forester, written for nonforesters' (p. xxi). It is a general essay, but it is full of numbers and detail, and rests on a firm understanding of the technical issues involved in forest management and forest ecology. The key to Irland's successful treatment of his material lies in his identification of five 'forests', each of which has a chapter to itself. These discussions show that the industrial, recreational, suburban, wild, and rural forest are 'defined by distinctive economic and geographic traits' (p. 8), but that they are not entirely discrete units; although broad areas can be assigned to each of them, their boundaries blur, and their characteristics overlap and intermingle. Thus the production of roundwood dominates the industrial forest, but hunters, fishers, and canoeing enthusiasts find recreational value in its wide spaces. Further, by bracketing his core treatments of these five forests with chapters that first outline the basic attributes and dynamics of the northeastern forests, and, later, drawing the story together in discussions of landownership, the 'timber budget', and the role of forests in the northeastern economy, Irland has produced a book that offers new insights into the complex challenges of forest and rural land management in the twenty-first century.

Less successful, to my mind, is his use of seven metaphors to summarize public concerns about and perceptions of the region's forests over time. Irland calls these

metaphors the 'intellectual tools with which we think about the forest' (p. xxi), and even suggests that they might be thought of as paradigms. Ranging from the 'town meeting' metaphor – 'shorthand for the various political factors and processes by which policies are shaped for forests' (p. 14) – through the 'worm's eye view' (the perspective of forest ecology or chemical engineering), to the idea of 'economic interdependence' – pointing to the globalizing economy and the interconnections of city, countryside and wildlands – these devices recur at irregular intervals through the text. Intended to enrich and broaden the relevance of the book, they probably diminish it for the serious social scientist or professional historian, because they appear more decorative than integral to its arguments, and are sometimes distracting as a result. In the end, however, these attempts to encapsulate complex matters in too few words undercut neither the scholarly breadth and impressive knowledge exhibited in this work, nor the value of the author's thoughtful (and not uncontroversial) suggestions about what might be done to meet the challenges likely to face the forest, its owners, its users, its managers, and its admirers in the coming half century (pp. 306–19).

GRAEME WYNN

DAVID VAUGHT, *Cultivating California. Growers, speciality crops, and labor, 1875–1920* (Johns Hopkins UP, 1999). x + 280 pp. 10 illus; 5 maps. £29.50.

Two presiding legends dominate the telling of California's agricultural history. In the white legend, California farmers are progressive, highly educated, early adopters of modern machinery, and unusually well organized. Through irrigation, they made a 'desert' bloom. Through cooperation, they prospered as their high-quality products captured markets around the globe. This 'farmers-do-no-wrong' legend is the mainstay of the state's powerful marketing cooperatives, government agencies, and agricultural research establishment. In the opposing black legend, the California agricultural system was founded by land-grabbers who continue to this day to exploit impoverished migrant workers, especially Latin American and Asian immigrants. This legend's classic statement is in Cary McWilliams' 1939 *Factories in the field*. (Even in its mildest form, this view faults California farmers for choosing, unlike their midwestern brethren, to become full-fledged capitalists.) As controversies over the nature of California's farm system have raged for the past century, one key agent, the individual farmer, has dropped out of the picture. In both accounts, a one-dimensional class of heroes/villains has stood in his place.

Going beyond the traditional approaches, Vaught's fascinating new study provides California's specialty crop

growers with a human face. Drawing from farmers' records, rural newspapers, and state reports, Vaught paints a detailed, nuanced picture of the region's horticulturalists in the period between the wheat boom of the 1870s and the rise of cotton in the 1920s. To emphasize the similarities and differences in the rural experience, *Cultivating California* focuses on four distinct clusters of activities: almond raising near Davisville, raisin-making in Fresno, hop growing in Wheatland, and deciduous fruit farming in the Sierra foothills. Each of these locations is in (or near) the state's Central Valley and each became highly specialized in one form of horticulture. Some might argue that in selecting these cases, Vaught neglects subjects of equal or greater importance, such as the rise of citrus culture in southern California, viticulture in the Napa/Sonoma region, or prune and apricot production in Santa Clara (today's Silicon Valley). I do not fault Vaught's narrowed focus because as it is, I found it difficult at times to keep track of all four of the balls the author has in play. To my mind, the book's most original case study is that of George Pierce, the pioneer almond grower whose daily journals Vaught uses with great success.

The book's main thesis is that the actions of the California specialty crop growers must be understood not only in terms of their business interests, but also of their 'culture'. *Cultivating California* argues that the state's horticulturalists created a highly idealized vision of their vocation, viewing it as a 'higher order of agriculture' (p. 48) or in George Pierce's choice words, as both 'pleasant and profitable' (p. 39). The cultivation of tree and vine crops required intelligence, patience and care. The final product both improved the diet of consumers and advertized the Golden State's charms. Rural leaders associated horticulture with permanent communities of orderly, family-scale farms, a clear advance on settlement patterns of the bonanza wheat period.

The troubling reality confronting this happy vision was that even a small-scale fruit farm faced harvest labour demands far beyond a typical family's scale. Indeed, the dependence on temporary labour in horticulture was greater than in grain growing. 'This bugbear of labour' prevented the development of midwestern-style agriculture. Transient white labour proved expensive and intractable and the horticulturalists' preferred solution, continued reliance of Chinese workers, was ruled out by the 1882 Exclusion Act. To their lasting regret, the specialty crop growers could bring order to their output markets but not their labour markets.

Vaught offers careful, grounded accounts of the labour process in each of his crops and of the efforts of his farmers to recruit sufficient labor. In contrast to the traditional view, he shows that workers often had

significant bargaining power, able to withhold work in the middle of the harvest to secure higher wages. In his single most path-breaking contribution, Vaught provides a reanalysis of the famous 1913 riot on the Durst/hop ranch in Wheatland. In rebuttal to McWilliams' interpretation, Vaught argues that hop growing was highly atypical of state's new horticultural activities and that only unusual circumstances (a trade depression and a delayed harvest) led to labour unrest in what was normally a highly sought after job. His retelling includes an interesting examination of the forces, principally the actions of self-promoting reformers and rival hop growers, which made the Wheatland riot the cornerstone of the black legend. Although *Cultivating California* at times sides too close to the farmers-do-no-wrong legend for my taste, it is a must for scholars interested in the Golden State's controversial history.

PAUL RHODE

SHAWN WILLIAM MILLER, *Fruitless trees: Portuguese conservation and Brazil's colonial timber* (Stanford UP, 2000). xiii + 325 pp. 15 tables; 8 illus. £35.

Many contemporary observers of deforestation in the Amazon region have asked the question, why do Brazilians burn the rain forest? Partial answers to that question, according to Shawn William Miller, date to the colonial period. While some blame traditional methods of slash and burn agriculture, Miller argues that Brazil's patterns of deforestation in the colonial period were a direct consequence of Portuguese forest policy and royal monopolization. As a consequence, Brazilians 'neither harvested nor exploited Brazil's high-quality timber trees, but annihilated them' (pp. 8-9).

Chapter One on the colonial landscape describes the types of trees that interested the Portuguese crown. Brazilian woods were then prized in European shipbuilding because planks made of *tapinhoã* wood were resistant to dry rot and shipworm (p. 23). Although intense demand drove up prices of *tapinhoã*, many in Brazil chose to burn the trees down rather than harvest and export them. Why did they do so? Miller finds precedents in medieval royal forest conservation policies, which were transferred to colonial Brazil. In order to obtain the best trees for shipbuilding, royal bureaucrats established lists of *madeiras de lei* (legal woods), which could only be cut by royal contractors and sold via monopoly channels to Lisbon. Although sugar planters had the right to cut the king's woods for their own use, they were forbidden to sell them upon pain of property confiscation. Therefore, many planters set fire to their forests in order to avoid losing their sugar plantations, or they harvested beautiful rosewoods and *tapinhoã* trees for utilitarian plantation structures.

After his critical summary of royal forest policy, Miller analyzes the role of timber and related products in the Atlantic economy. He lists timber exports to Portugal (1796–1819) and concludes that the major port of export was Rio de Janeiro with nearly 40 percent of all timber after 1796 (p. 88). His statistics on timber imports into Portugal reveal that Sweden, the United States, Russia, Britain, and Prussia all shipped more timber to Portugal than did Brazil, which supplied only 9.5 percent of Portugal's imports (p. 91). In spite of having high-quality timbers, Brazil did not dominate the Portuguese market. Instead, as Chapter Three clarifies, 'most timber was consumed in the colony' rather than the metropole (p. 103).

Chapters Four and Five cover labour, cattle, roads, and technologies. Chapter Four illustrates the role of Indians, free people of colour, and enslaved blacks in felling the trees, while the skilled ranks were composed of whites and immigrant Portuguese carpenters. Miller also calls attention to harsh working conditions, including the portage of heavy logs by teams of Indians or black slaves guarded by soldiers. Chapter Five examines logging technologies, such as the sawmill, as well as the unique difficulties of harvesting tropical timber, including the lack of oxen and worker reluctance to cut trees outside of the waning phase of the moon (p. 135). Miller concludes this chapter with a comparison of North American and Brazilian sawmill technologies and reports that they were the same, although North Americans had a greater number of mills.

The author thinks that Brazil had so few sawmills close to coastal markets because it lacked natural harbours on navigable rivers. The transport of lumber was difficult and costly. Some timber rafting was possible, but tropical woods were often heavier than water and inclined to sink. Brazilians overcame these difficulties by designing rafting canoes to transport heavy woods to the coast. However, this coastal trade added much to freight charges before the lumber was loaded on to transatlantic ships. High import and export duties, which the author details, further hindered exports of Brazil's lumber.

Miller's final chapter studies Brazil's private shipbuilding industry and contrasts it to the royal naval yards, where ships were slowly and inefficiently built. After all the centuries of deforestation, Miller calculates that Brazil's royal yards built fewer than 100 ships for Portugal's marine (p. 193). In contrast, Brazilians constructed many ships for private use in Bahia and Rio de Janeiro for the European, intracoastal, and African trades. Apparently, there was a significant privately-owned and operated shipbuilding industry in colonial Brazil that utilized much of Brazil's high-quality timber.

The author's conclusion summarizes Luso-Brazilian

critiques of the king's timber policies and addresses the role of the timber industry in economic development in contrast to North America. Miller reiterates his central theme that the crown's timber policies did not promote economic development or conservation of forests but contributed to the 'profligate waste' of Brazil's forests (pp. 216, 223). Therefore, he argues, few of Brazil's timbers were employed in the accumulation of wealth and capital (p. 231). However, his previous chapter suggests that residents of Brazil were profiting from logging and shipbuilding; only a more intensive examination of wills and inventories will document timber's role in colonial Brazilian wealth accumulation.

Overall, this is a thoughtful study of royal forest policy and its consequences for the economy and environment of colonial Brazil. Miller effectively advances historical explanations for the role of public policy in the burning of the Brazilian Atlantic forests before 1822 but less convincingly blames crown lumber policy for retarding Brazil's economic development and capital accumulation. The author's background in woodworking and forestry in the United States is most helpful in the interpretations of his sources, and the most interesting sections of the book concern all aspects of woods and their uses before 1822. *Fruitless trees* is recommended to those who follow deforestation issues, past and present.

MARY KARASCH

H. T. HUANG, *Science and civilization in China*, VI, *Biology and biological technology: Part 5, Fermentation and food science* (CUP, 2000). xxviii + 741 pp. 61 tables; 136 illus. £95.

The series *Science and civilization in China* was started by Joseph Needham in the 1950s. New sections, each one a comprehensive review of a scientific field, continue to emerge. H. T. Huang's new volume, *Fermentation and food science*, is one of the best. Like the other outstanding sections in the series, it is far more than a definitive and up-to-date review; it is also literate in the best sense of the term, amply illustrated, judicious, and a pleasure to read.

The work begins with a treatise on early agriculture in China; this ground was covered in earlier volumes, but an update was necessary, since dramatic new discoveries (including domestic rice more than 10,000 years old) have changed our understanding of the subject. This segues into an account of early foodways. Next, a valuable chapter thoroughly covers the Chinese literature on food preparation, from earliest times onward.

We then come to the real substance of the book: studies of fermentation technology. The first is a long section on Chinese alcoholic drinks. This is notable for its detailed discussion of the evidence for distillation in

China as early as the second century AD. It now seems virtually certain that distillation of alcohol was a Chinese invention. It probably spread to the western world, though independent invention in the latter is not ruled out. Dr Huang then speculates on the much more ancient and obscure origins of non-distilled alcoholic drinks in China and in the Near East. He concludes – I believe correctly – that Chinese *chiu* (alcoholic beverages) arose from thin grain gruel that had been left to stand, whereas the Near East began with grape wine and went on to produce beer from bread broken up in water and inoculated (at first, presumably, accidentally) with wine yeast. Many species coexist in Chinese ferments; by contrast, the western world uses only one (*Saccharomyces cerevisiae*), rarely supplemented with *Lactobacillus* or other organisms. In China as in the traditional West, every brewery has its own strains of organisms.

The next chapter concerns the versatile soybean. Dr Huang notes that the raw soybean is rich in damaging chemicals, which must be removed if the mature bean is to be taken seriously as a food. An amazing variety of technologies do this, from soy sauce preparation to manufacture of bean curd. The latter now appears to have started much earlier than was thought until very recently. The earliest references to bean curd (*tou fu*) are from the medieval period, but Chinese traditional histories always maintained it was much older. However, archaeological evidence now suggests that bean curd may have been invented about when Chinese tradition said it was: in the Han Dynasty (207 BC–220 AD). Dr Huang then turns to the more complex topic of soybean fermentation – that is, the production of the pastes, soy sauces, and pickled beans that exist in seemingly inexhaustible variety. He provides some data on the microbiology of these processes, but much more would have been welcome. Then follows a chapter on preservation. China has long excelled in the arts of pickling, saucemaking, and the like. Meat pastes seem to have been the forerunners of bean curd. Fish pastes and sauces are made by autolysis as well as fermentation. A thorough review of fish sauces throughout the Old World is provided.

Huang then turns to tea, China's caffeine boost, which includes structural formulae for the catechins that (among other things) make tea a healthy drink. This naturally leads to a chapter on general questions of health and deficiency. Chinese nutritional medicine, based on a system rather different from anything in the west, succeeded at keeping the Chinese from succumbing totally to the chronic famines that beset the land. Many nutritional problems were identified, and effective treatments empirically established (but sometimes forgotten later) for them. They include syndromes comparable to goitre, beriberi, rickets, and other western categories.

Dr Huang concludes with respectful comments on the greatness of Chinese food technology, but ends the book on a thoughtful note: a discussion of leads not followed up. Why did the Chinese not go farther in mycology, in nutritional science, and in diet therapy? Poor scientific communication, a medical system not attuned to analysis, and a general lack of interest in basic science are adduced. Many, if not most, scholars would add the more general point that China's centralized imperial bureaucratic system was not congenial to scientific progress.

The Chinese were unquestionably among the world leaders in food technology and in nutritional medicine up until the twentieth century. They still produce many leading researchers and countless new techniques and discoveries. One might speculate on why China has been such a leader for so long. The irrepressible gourmetship of the Chinese people provides the most obvious answer. A country where even the poorest are connoisseurs is one that will produce great foodstuffs. Also, China's chronic famines, coupled with the demands and extortions of the powerful, forced rich and poor alike to find every means possible for preserving food. It is to China's credit that the traditional government usually provided enough security to make food preservation (by definition, a long-term strategy) worth the effort. The real credit, however, belongs to the brilliant but anonymous women and men who created this technology.

Dr Huang has exhaustively mined Chinese traditional literary and technical sources. In keeping with the best traditions of the Needham series, he includes many beautiful and well-translated poems, and illustrations of many exquisite traditional pictures and utensils. There are minor errors and controversial points, but they do not detract from the work.

E. N. ANDERSON

ROBIN W. DOUGHTY, *The Eucalyptus: a natural and commercial history of the gum tree* (Johns Hopkins UP, 2000). xiv + 237 pp. Illus. £31.

The subtitle of this welcome book signals bold ambition. Puzzling intersections of 'natural' and 'commercial' histories continue to provide compelling challenges for adaptive modern scholarship. It has been relatively well established that nature's independent dynamic is never entirely suppressed and that commercial imperatives have variously preceded, ignored, co-opted, directed and resonated with scientific progress. If interdisciplinary routes appear to hold out the most promise, that does not guarantee the quality of the ride: by definition, seemingly, interdisciplinarity is susceptible to incursions from under-adapted vehicles, and some of the most earnest endeavours succeed as often through provocation as

in the crafting of valuable new insights from a kind of bibliophilic entrepreneurialism. *The Eucalyptus* makes the point well enough: precariously engineered, strewn with haphazard reckonings and untutored landings, it is also agreeably brief and contrives by accretion to encourage fellow travellers.

A prefatory note declares a ruling intention to uncover the antecedents of the current international popularity and notoriety of the Australian eucalyptus. The text proper opens with 'The geography of eucalyptus' and is essentially confined to Australia. Preface notwithstanding, this is presumably designed to underline specificities of ecological context, prodigious environmental range (tropical-temperate), number of species and chronically disputed categorization, together with lesser-known economic and other versatilities (honey, industrial and reputedly medicinal oils) which have significantly complemented orthodox timber values down the centuries. Successive chapters then pick up the dominant themes – early assisted migrations from Australia backed by individual champions ('connoisseurs', 'enthusiasts', specialized and opportunistic scientists) in Australia and the receiving countries; case studies of selective transplantations to the British Isles, California, Brazil, South Africa and India, clumsily interrupted by discourses on the contingent involvement of industrialists and increasing emphases on pulpwood; consolidating annotations on stubborn environmental issues; an outline of the engagement of modern international agencies in the promotion and establishment of eucalyptus plantations and latterly in assessing the mixed consequences; and a recapitulatory conclusion clarifying the gaps between expectations and outcomes, the sustained but changing input of expertise, and an escalating inclination to translate combinations of expanding scales of activity and government-industrial linkages into a contagious hostility towards the invading eucalypt.

The loose framework permits irritating repetitions and tangled overlays. Serendipitous illustrations, inapposite chapter titles and unimaginative subheadings underline the rising need for more recourse to external assessors and a return to reliable technical editing—which would (or should) have noted odd slips: eucalypts are scarcely

endangered by falls in temperature down to 22°C (p. 30); Sir William Denison (not 'Dennison') was only nominally Governor-General of Australia in the 1850s, since that term attained its present meaning in the following century (p. 129); and Rutherglen is located in Victoria, not New South Wales (p. 22). Doughty's biogeographical skills might have been allowed more scope, not least to analyze more satisfactorily the complex field trials and the (often startling) range of performance exhibited overseas by the minuscule fraction of Australia's formidable 'gum' family. Furthermore, to the extent that such trees came to be envisaged as 'crops', there are good profits to be gained from closer consultation with the vast literature in agricultural history and the related history of technological transfer.

Though sketchily researched and flawed in its narration, the book does attempt to give due prominence to key actors and institutions. But that returns us, finally, to its innocent subtitle. *The Eucalyptus* disappoints in its grasp of relevant local and global trends in scientific and technical thought, and on those counts there can be no appeal to imperious brevity. For example, in some respects the Australian tussle with the Eucalypt now serves as a reasonably representative entrée to the more inclusive legacy of pure and applied science on the periphery of empire, an understated historiographic ingredient in Doughty's account. And unfortunately it is symptomatic that, while he feels repeatedly drawn to the pervasive role of Victoria's Baron Sir Ferdinand von Mueller, he shows no awareness of many earlier explorations of that role which have been in print for about three decades. The cited key actors for Africa and the Americas may be no better served. In terms of enveloping social and political contexts it could be similarly argued that Doughty locates slightly too much of the process of local and regional rejection in the modern era: the ample evidence of deeper roots in the colonial experience is merely skimmed.

So *The Eucalyptus* calls our attention, once again, to an urgent need to reconnect science and historiography – and to a specific opportunity. Perhaps the quest for antecedents is better conducted from vantage points that demonstrate a more comfortable anchorage in the past.

J. M. POWELL