first major re-planning along orthodox Benedictine lines is now attributed to Henry of Blois (d. 1171), long-serving abbot and bishop, whose great abbey, constructed in the mid-twelfth century, was almost entirely destroyed by a fire in 1184. We learn that its replacement was, presumably intentionally, decoratively conservative, respecting the architectural authority of its predecessor. Furthermore, lesser rebuilding projects continued into the fifteenth century.

There are some benefits of working on old material in the twenty-first century. The artefact studies are new and of much interest, demonstrating the advances made in both scientific analysis and specialist knowledge in recent decades, and the increasing precision that this facilitates. The tile report by Harcourt, for example, confidently identifies different production sites based on fabric analysis as well as typology, demonstrating the way in which the abbey acted as a node for the regional distribution of styles of paving; she can identify a heraldic group precisely linked to the marriage of Edmund, Earl of Cornwall in 1272. Baxter, in his review of the Romanesque architectural sculpture, argues that it is linked stylistically to comparable material at Winchester and elsewhere through the person of Henry of Blois, who commissioned the cloister arcade from which many of the fragments seem to derive.

One of the most interesting archaeological discoveries at Glastonbury is surely the evidence for Anglo-Saxon glass working, first identified under the later medieval cloister in 1955 by Radford, who attributed it to the tenth century. Radiocarbon dating has now convincingly demonstrated that the kilns are linked to the monastery established by King Ine in the late seventh century. Wilmott and Welham's appraisal of the archive has now identified five furnaces, where glass cullet from the eastern Mediterranean and possibly also from local Roman sites was recycled into both vessels and window glass, as part of Ine's building project.

The volume is extremely well produced, with numerous colour phase plans to assist in understanding the interpretation of the often bewildering stratigraphy; although considerable care has been taken with these, many are still quite hard to follow. Overall, a good job has been made of a tough challenge, but there can be little doubt that Glastonbury still retains some of its secrets. Fortunately, there is still quite a lot of archaeology

left below ground for future generations to explore.

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TIM TATTON-BROWN & WARWICK RODWELL (ed.). Westminster I: the art, architecture and archaeology of the royal abbey (British Archaeological Association Conference Transactions 39.1). 2015. 415 pages, numerous b&w illustrations. Leeds: Maney; 9781910887240 hardback £108.

TIM TATTON-BROWN & WARWICK RODWELL (ed.) Westminster II: the art, architecture and archaeology of the royal palace (British Archaeological Association Conference Transactions 39.2). 2015. 270 pages, numerous b&w illustrations. Leeds: Maney; 9781910887271 hardback £85.



Westminster Abbey and the Palace of Westminster form the most significant complex of royal buildings of the medieval period in Britain. The Abbey is the most complete

medieval example in the country, and, although battered, burnt and having lost much of its building stock, there is no doubt that the Palace, as we know it today, contains the remains of a medieval palace unrivalled in England; nothing survives on such a scale in Ireland, Scotland or Wales. As for rural royal palaces of this period, Woodstock (Oxfordshire, now Blenheim) has disappeared virtually without trace beneath an eighteenth-century landscape, and Clarendon (Wiltshire), abandoned as a royal residence by AD 1500 and plundered as a stone quarry, has been reduced to a few stub walls representing what was apparently perceived during excavations in the 1930s as final occupation layers.

The unique importance of Westminster justifies a comprehensive, archaeological and architectural study. But that task is complicated because the buildings remain in daily use for aspects of governance and for royal and ecclesiastical ceremonies. Unlike their ruined country cousins, they are consequently not easily accessible for intensive study (not that country residences have, in the twentieth century,

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received adequate archaeological study either; as the century of the common man proceeded, especially after the Second World War, the interests of many civil servants turned to prehistory). In addition, there are huge archives to be tapped, both of royal records and of topographical, architectural and, to a much lesser extent, archaeological records of the buildings. And much evidence—some documented in photographs—has already been lost; for example, during the creation of Parliament's underground car park or as a result of the 'catastrophic' reconstruction of war damage that went ahead without any recording.

To have these volumes from the dynamic duo of Rodwell and Tatton-Brown- recently described as the intellectual descendants of the great Robert Willis, the nineteenth-century 'father' of the modern study of medieval elite architecture—is highly promising and they do not disappoint. These Westminster volumes are produced through the British Archaeological Association, whose "studies of individual cathedrals drew on his [i.e Willis's] methods. And with contemporary practitioners such as Warwick Rodwell and Tim Tatton-Brown, the debt that cathedral archaeology owes to Willis's foundational work has at last been recognised" (Meara 2014: 409). Westminster Abbey was only very briefly a cathedral during the mid-sixteenth century, but its fabric may usefully be compared with, and placed within the context of, other surviving abbeys (later cathedral churches) and more ancient sees. There is no doubt that the convening of the Westminster conference by the British Archaeological Association in 2013 achieved with such energy—has resulted in the publication of a broad collection of papers from the distinguished lecturers, enhanced by additional contributions from others who did not speak (e.g. Binski and Guerry). It is a signal triumph unlikely to be repeated in our lifetimes.

So what do we learn and how do the contributions broaden and deepen our understanding of medieval royalty in England, both in its secular and religious manifestations? Medieval royalty ruled, not without some depositions, murders and alarms; kings appointed archbishops and abbots, elevated their servants to bishoprics and other offices, parked illegitimate children in religious houses and, from time to time, took for themselves the income of lands held by religious landlords. So we should start with the palace—addressed in the slimmer of the two volumes—and of which much less survives than of

the abbey. Helpfully, we learn not only about material remains, but also about the way in which these two buildings worked together. A key point of connection involved coronations; here Coldstream reminds us that the ceremony began in the palace to secure secular authority, before moving to the abbey and ending with the mass. Thus it is unwise to see representations of medieval coronations as necessarily showing what occurred in the abbey, where a coronation chair survives, but must be considered in the wider context of what would have existed in the palace too. Other contributions (e.g. Crook and Jansen) illuminate what has been lost, by fire and demolition, or obscured by later work within the palace.

But for both palace (for example, the great hall of the late eleventh century) and the abbey, it is the survivals and their interpretations that are most arresting. Some long-debated conundrums are afforded new interpretations. One such is the question of how the roof of the great hall of Rufus's reign (d. 1100) was ceiled over. A cogent case, drawing here as elsewhere on continental parallels, is made by Harris and Miles for a great panelled ceiling supported on a complex frame of comparatively small scantling timber struts that would fit with the long-known lack of evidence of any supports for aisles at that early date. In a characteristically chirpy piece by Munby, the replacement roof erected in Richard II's reign is afforded new analysis, and less commonly cited sources, such as the Baines records of the early twentieth-century repairs, are considered.

One of the many strengths of these volumes is how the complementary treatment of the evidence from the palace and abbey allows survivals in one to compensate for losses in the other. Thus, while the loss of the thirteenth-century Painted Chamber and the fourteenth-century Chapel of St Stephen occurred in the disastrous fire of 1834, the analysis of paint pigments surviving in the abbey (Howard and Sauerberg) and of the Chapel of St Mary of the Pew (Spooner) demonstrates how we can find tangible evidence of matching elements of decor and structure in the abbey lost in the palace. (The pigments can also provide a firm basis for interpreting fragments from sites such as Clarendon where the colours are visible in museum collections, but no resources beyond work on azurite, ultramarine and minium were possible due to a lack of funding.) The Pew Chapel provided contemporary surviving fabric that may be readily matched to the now lost Chapel of St Stephen, which was completed in the mid-fourteenth century.

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There is an intriguing debate about the function of the Jewel Tower (built 1365-1366): was it a treasury building (the traditional view, Ashbee), or was it a garden tower (Everson), where Edward III could be private and/or view his gardens, and annoy the Westminster monks by overlooking their property (the site of the tower itself having been previously requisitioned from them)? There was certainly treasure in the 1360s (despite the death of the ransom cash-cow John II in 1364), and in certain respects the tower was a forerunner of muniment towers and other projects built in the following decades and involving members of the same team, such as Herland, at Wykeham's New College and Winchester College. An intriguing and open-ended debate, keying into theoretical discussions of growing 'closure' in the later Middle Ages when compared to the open visuals of the royal bed, for example in the Painted Chamber, a century earlier (Wilson). The palace volume closes with a weighty and wellillustrated piece by Collins tracing developments, survivals and losses between the cessation of the use of the palace as the principal royal residence c. 1531 and the infamous fire of 1834, when over two-thirds of the buildings were gutted.

The volumes are not, and could not have been in any sense, comprehensive, but they open windows on the buildings both in the medieval period (e.g. the Romanesque abbey; Woodman; Harrison & McNeill), through the medieval period when Edward the Confessor became literally enshrined as the national saint in the thirteenth century, to the modern period. Re-evaluation of the contribution of G.G. Scott is offered by Brindle, and Rodwell makes severe criticism of the restoration and rebuilding work of Stephen Dykes Bower between the 1950s and 1970s. Rodwell also explains how statutory provision to ensure the proper recording of works at the abbey was only established as recently as 1998.

These are excellent and highly scholarly productions that will be of great value to all future students of both abbey and palace. There are inevitably a few minor flaws, the scale of reproduction of drawings, the misuse of apostrophes and the like, but such shibboleths are insignificant compared to the overall achievement. The promptness of publication will also help to ensure the protection of these battered and abused structures, where, not least due to the editors of the volumes and their contributors, so much has been achieved in the face of so many culpable and unfortunate losses. These volumes reveal the unique

combined significance of palace and abbey over so many centuries, and which for so long embodied the seat of rulers and their ecclesiastical servants before continuing down to the present as the seat of the legislature and the Westminster royal peculiar of the monarch respectively.

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JAN J. BOERSEMA. *The survival of Easter Island: dwindling resources and cultural resilience*. 2015. xvi+296 pages, 44 b&w illustrations, 1 table. New York: Cambridge University Press; 978-1-107-02770-1 hardback \$99.



Much has been written about ancient Easter Island and its supposed 'collapse' following resource depletion and overpopulation. The

island's past has been frequently cited as the quintessential case study of 'ecocide', and offered up as a warning about impending global catastrophe. Much has now also been written about how this Easter Island collapse is a myth that grew out of misunderstandings and various agendas. In this book, Boersema takes up this question of Easter Island's prehistoric resource use and cultural resilience.

In Chapter 1, Boersema introduces the well-known collapse narratives of Ponting and Diamond, as well as Flenley and Bahn, who describe Easter Island's dwindling resources and overpopulation leading into a downward spiral, and ultimately to societal and demographic catastrophe. Boersema notes that observations of the first European visitors to the island in 1722 portrayed a healthy and peaceful society with productive gardens, thus raising the question of how the notion of collapse developed in the first place.

In Chapter 2, the author recounts speculations on the origins of the islanders (Polynesian or

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