

BOOK REVIEWS

A mosaic menagerie: creatures of land, sea and sky in Romano-British mosaics, by Patricia Witts, BAR British Series 625, 2016, 266pp., b/w and colour illustrations, £53. ISBN 978-1-4073-1541-6.

The founding of Asprom (the Association for the Study and Preservation of Roman Mosaics) in 1978 has had enormous implications for the understanding and study of Romano-British mosaics. Under its aegis in the 1980s and 1990s present day mosaic luminaries such as Steve Cosh, Patricia Witts and this reviewer were encouraged, thrived and have furthered the study of the subject by their academic publications. Witts is publicly known for her popular *Mosaics in Roman Britain: stories in stone* (2005), but her new *Mosaic menagerie* is a reference work that will long be useful. This pioneering study attempts to classify over 700 animals of land, sea, sky and mythology pictured on over 140 known Romano-British mosaics. The animals are discussed and their possible symbolism and roles in interior decoration assessed. Witts accompanies every entry with comprehensive notes and bibliographies and is scrupulously fair in mentioning the interpretations of others.

Sections labelled 'Quadrupeds and Snakes', 'Sea Creatures' and 'Birds' follow an Introduction. Each section encompasses identification and a discussion of the subjects and is followed by pages of figures. What is delightful is that Witts has also included the mythological menagerie in her catalogue. I was personally delighted to find a section on the *pistrix*, the long-necked, wolf-headed and plesiosaur-like creature found on the lost mosaic from the *cella* at the Temple of Nodens at Lydney and also at Kingscote. Although known to academia on the Continent the species 'pistrix' has up to now only featured in my papers in Britain. The volume is lavishly illustrated, although occasionally the images are too small to be effective, and oftentimes reliant on drawings rather than photographs. This is particularly tiresome in the case of the Newton St Loe Orpheus mosaic that this reviewer reassembled in 2000, where an inaccurate museum 'tracing' is often used in preference to either the monochrome photographs taken before the floor was 'lost' or (strangely) the actual animals of the rediscovered and reassembled floor. It is a sad reflection on our times that images of mosaics held by the British

Museum were so onerously expensive, even for such an academic volume, that the author has been forced to guide readers to their website rather than including them in the volume.

In a section entitled 'Comparing the Creatures of Land, Sea and Sky', Witts discusses the popular concentrically ringed Orpheus mosaics that Roman Britain seems to have made its own. She also discusses what is notable, unusual or missing from the animal repertory in Britannia. The province obviously had its own preferences and ideas as to what was desirable mosaic decoration. Dolphins are remarkably popular, as are birds. Missing are the large scale amphitheatre *venationes* and genre scenes of other provinces. With the notable exception of the fragment from East Coker, British hunting scenes are often without human participants, consisting of hounds chasing prey. As opposed to the large scale, multi-peopled mythological panels found in Mediterranean and eastern provinces, Britannia seems to have preferred floors featuring several smaller compositions condensed to two or three participants ... a visual *aide memoire* to the educated viewer to reconstruct the scenes and stories in their mind's eye.

Witts discusses the role and meaning of the creatures on the mosaics. It is easy to read symbolism into the choice of emblems, and indeed some must have been chosen either for their protecting or religious allusions, but others (especially birds) would surely have also been pretty space fillers, perhaps tying in with decorative wall plaster. She covers room function and how mosaics would have been viewed by those entering or within a chamber. Lacking the placement of windows, this can have difficulties with dining rooms. Although her statement that diners enjoyed views outwards (p. 145) is correct, this was often through windows in the rear, apsidal or side walls and not necessarily through the entrance way which was often blocked by a corridor wall.

A catalogue, packed with references follows. It is here that the small scale of some illustrations of complete floors is a problem but attached are several full sized plates. Finally four appendices further classify the creatures by species whilst one attempts to date the pavements based on dates proposed by Cosh and Neal in their *Roman mosaics of Britain*. Although a basic framework exists, the dating of British mosaics is still very much a matter

of guesswork, especially concerning the third and fourth centuries AD.

A Mosaic menagerie is a splendid addition to mosaic studies and will appeal to both expert and amateur alike.

ANTHONY BEESON

A medieval manor house rediscovered: excavations at Longforth Farm, Wellington, Somerset, by Simon Flaherty, Phil Andrews and Matt Leivers (plus other contributors), Wessex Archaeology Occasional Paper 2016. 60 pp., 24 figures, 25 plates and 6 tables, mostly in colour, £7.50. ISBN 978-1-874350-85-9.

The discovery of a major medieval building complex at Longforth Farm to the east of Wellington caused great public excitement as witnessed by the very successful open day held on-site in the summer of 2013. At that time there was much speculation as to the nature of the buildings that had been uncovered, but there was also a lack of firm knowledge about when or why they were there, who had occupied them, and why they appeared to have been abandoned by the early fifteenth century. This new occasional paper from Wessex Archaeology therefore provides some very welcome and keenly awaited information about the excavation. All those who contributed to the paper are to be congratulated on the level of detail that is provided, although the mystery of the building complex remains yet to be fully resolved. The title of the paper shows the authors' belief that the layout of the buildings matches that of a manorial site, and the possibility that the buildings belonged to the bishops of Bath and Wells is not unreasonable. However, the lack of supporting historical evidence is exceptionally frustrating.

Despite the mystery that still surrounds the site, this paper provides a wealth of detail on the excavations, the building materials used, the physical finds and the local environment and economy during the period of occupation. In their introduction, the authors describe how previous work had revealed evidence of human activity dating to the Bronze Age, plus some pits containing medieval pottery. However, the discovery of the manorial buildings came as a great surprise. In her chapter on the historical evidence, Mary Siraut describes how the manor of Wellington, with Buckland, belonged to the bishops of Bath

and Wells in the late medieval period. However, the location of the bishop's court is unknown. She points to the evidence suggesting that the buildings at the site may comprise the bishops' earliest manor house in Wellington. The few entries in the court rolls during the period 1343 to 1383 talk of the lord's court, but unfortunately they provide no specific information on its location. The published registers for the bishops of the period give no further insights.

While the historical record appears almost mute, the excavations themselves have much to tell us. The archaeological team identify three main phases of occupation. The first is centred around the Bronze and Iron ages, although there are some finds dating as far back as the Palaeolithic. The landscape features of ditches and gullies yielded pottery sherds, and these finds are well summarised in Chapter 5. The second and most exciting phase of occupation is, of course, the late medieval building complex, dating from around the late twelfth until the late fourteenth or early fifteenth centuries. The stone from much of the complex seems to have been robbed, but the authors state that the overall layout was clear, or could be extrapolated with some confidence. The paper contains some striking reconstructions of the site, and the visualisations in Chapters 3 and 7, although speculative, are beautifully realised. The third, post-medieval phase of occupation appears bland in comparison.

In Chapter 4, Bob Davis describes the building materials for the manor, and these include some very high quality ceramic floor tiles. Such tiles would only be found in a high status building. The finds discussed by Lorraine Mephram in Chapter 5 include some sherds of medieval Saintonge ware, which she describes as being restricted to higher status sites. Chapter 6 on the environment and economy illustrates that the site was a rural, agricultural one. The concluding chapter is a discussion that brings all the evidence together to suggest that the complex at Longforth Farm was indeed the medieval manor house of the bishops of Bath and Wells. The authors are cautious, however, saying they may be incorrect, and that the linkage of the strands of evidence is somewhat tenuous.

The paper contains a full bibliography and is well illustrated throughout with colour photographs and visualisations, line drawings and tabular information. There are few errors or omissions, although some items referred to in the text are not listed in the bibliography. The suggestion on page 49 that the parish church in Wellington was largely

rebuilt in the fifteenth century as St John the Baptist is at odds with other scholarship suggesting that it remained dedicated to St Mary until much later. However, these minor quibbles do not detract from the great value of the paper, and it will be enjoyed by specialists and more general readers alike.

DES ATKINSON

Taunton Castle, by Chris J Webster, Somerset Archaeological and Natural History Society, 2016, 378pp., 180 illus., £45. ISBN 978-0-902152-29-8

This volume forms the first comprehensive reassessment of Taunton's castle in a century. It came about as a result of archaeological work carried out to inform the redesign and refurbishment of the old Somerset County Museum and its reopening as the Museum of Somerset in 2011. It is a collection of scholarship and research, including a number of previously unpublished archaeological investigations, which has been brought together and placed into its chronological, geographical and to some extent its theoretical context.

The Castle is a place of contradictions. Taunton was an important and valuable manor belonging to the diocese of Winchester from an early date, yet it was geographically distant from the bishopric and seldom visited by the bishops themselves. The site (and in particular the Castle's former Inner Ward) has been subjected to extensive excavation, but publication and synthesis has been patchy. Why has it been so neglected and why is it not better appreciated on a regional or national level? The answer must lie at least partly in the dearth of straightforward interpretations of the standing and archaeological remains. And, as Webster states, "Taunton Castle is, in truth, rather odd." (p. 284).

The book is divided into three sections. The first sets out a vast quantity of historical and archaeological evidence. The bishopric of Winchester's pipe rolls, which form an unusually comprehensive primary resource, are examined systematically in relation to Taunton Castle for the first time, thanks to Mary Siraut. These accounts supply a huge amount of information on the Castle's buildings and rooms through the thirteenth to fifteenth centuries, which had previously been difficult to access due to their (almost entirely unpublished) medieval manuscript form. Post-medieval descriptions and depictions of the Castle are considered next and then the archaeological

investigations within the Inner and Outer Wards between 1874 and 2013 are described. Unfortunately some of the earlier investigations were not well-documented so there are some frustrating but necessary gaps, although a little light is shed by Webster's detailed examination of contemporary records and photographs. The second part of the volume turns to the various elements of the Castle, which are described in turn and interpreted in relation to the evidence laid out in part 1. This section contains a series of impressive stone-by-stone elevations which were prepared especially for the book and are colour-coded according to stone type. The third and final part is the discursive section, which includes a comprehensive account of the Castle's origins and development, and examines its role in the bishopric estates and the broader significance of the site within castle studies.

To the author's dissatisfaction, many of the documentary references cannot be married up easily with the evidence from the surviving standing buildings and archaeology. As the available evidence is often lacking, what little there is necessitates presentation in great detail. The resulting arguments are sometimes intricate and complex, and the general reader may find this hard to follow at times. This is caused by the nature of the evidence rather than any fault of the author. The inclusion of a series of three-dimensional reconstructions, to complement the volume's plans, might have facilitated understanding, although perhaps it was felt that such drawings would be too speculative.

The author is to be commended for taking on a project fraught with so many difficulties and unanswered questions. He has produced a readable and thorough piece of work, which should bring Taunton Castle to a higher level of appreciation within the study of castles in the south-west and further afield. Unless major new work is undertaken on the site it may well be another hundred years before a new reassessment is necessary.

NAOMI PAYNE

Somerset mapped, by Adrian Webb and Emma Down, Halsgrove, 2016, xxv, 230p., colour illus., £24.99. ISBN 978-0-85704-287-3

As a geographer I am immediately interested in any book with the word 'map' in the title, so this attractively produced study of historic maps of

Somerset, written by two acknowledged experts on the subject, promised much.

In the book the authors 'explore the different depictions of Somerset and its districts as it has been shown by map-makers and cartographers over the centuries.' After a foreword by Dr Robert Dunning a 14 page introduction looks at the general historical picture and individual topics, particularly those especially relevant to the county – its transformation by roads, canal and railways. This is followed by a select but wide-ranging bibliography over four pages and two pages of detailed references. The bulk of the book is a series of well-illustrated examples covering the historic county of Somerset arranged chronologically, ranging from the Stone Age (later maps of the Stanton Drew Stone Circles) to the late 1950s. These include historical maps, those for practical and functional purposes and oddities such as geographical games. An index is useful divided into personal names and places.

The delight of the book is the many ways that one can approach it.

1. One can of course read it from cover to cover, and if nothing else the introduction is worth this close attention.

2. Then one can browse the wide selection of examples, perhaps going from one to another as the fancy takes one. Or, maybe, look for a particular place, or theme, or admire the maps as works of art. Inevitably in such a wide-ranging survey of the subject there are surprises. Those that caught my eye were a 1662 map of the Somerset levels with north at the bottom right hand corner of the map, temporarily flummoxing your reviewer; a map of the Bristol Channel coast made in 1768 Lieutenant Colonel Paule St de Beville, a French spy and map-maker; another of the Channel by William Hole in 1612 in which the English and Welsh shores are lined with a multitude of women musicians, including one playing the pipe and tabor, (my own instrument), seemingly nothing to do with the purpose of the map, and 'a map to illustrate the Annals of Bath and Wells' published by, of all bodies, the Society for Promoting Christian Knowledge.

3. One can see how the technology involved has varied and the different roles of the mapmaker and the cartographer (although this is not made clear). One wonders what they would have made of modern technology in the pre-computer age.

4. The researcher can use the book as a resource, using either the examples or the bibliography/ references.

In conclusion, I have no adverse comments

on this superb work, save one point. The latest example given is from 1958 because, I understand, of copyright considerations. However much has changed over the last 60 years through the advent of computer and satellite technologies, which have changed fundamentally surveying techniques, map production and the availability and range of data available in map form, all of which profoundly affect what is available to historians and other users. It would have been a welcome conclusion to the book if the authors had reflected on this at the end of the Introduction. That apart I had great expectations of this book and was not at all disappointed.

DAVID RABSON

William Boyd Dawkins and the Victorian science of cave hunting, by Mark J. White, Pen & Sword Archaeology, 2017, ix, 302 pp., figs and plates, £25. ISBN 978-1-47382-335-8

William Boyd Dawkins (1837–1929) joined the Somerset Archaeological and Natural History Society in 1863 and became 'father of the society' or longest serving member on the death of his friend the Revd H.H. Winwood in 1920. He served as president in 1912 and again in 1922 and was a frequent attendee and speaker at the society's three-day annual meetings. He described himself as a 'Somerset man by adoption' (his father was vicar of Westonzoyland from 1854 till his death in 1861), but most of his long life and distinguished career lay outside the county, and the present book is the first one to give anything like a full account of it.

The author is Professor of Palaeolithic Archaeology at Durham University, and demonstrates total mastery of the immense literature and source material on Dawkins' academic work. There are 23 pages of notes, and 18 pages of bibliography, six of them devoted to publications by Dawkins himself.

Dawkins went to Oxford in 1857 and took with enthusiasm to geology, anatomy and palaeontology, extending his stay for two years with the first Burdett-Coutts scholarship, and acquiring formidable ability and influential friends. He conducted three seasons of productive excavation in the Hyaena Den at Wookey Hole, finding remains of woolly rhinoceros, mammoth, bear, wolf and horse, showing characteristic signs of gnawing by hyaenas, but also a hand-axe and a few other man-

made artefacts, in time to feed into still fresh claims about the antiquity of man.

From 1862 to 1869 he was employed as an assistant geologist at the Geological Survey, but his heart was not in this work, and he was not a great success there. He was instead investing boundless energy and enthusiasm into unofficial work as a vertebrate palaeontologist, visiting and studying museum and private collections all over the country. In 1866 he was invited by the Palaeontographical Society to compile its prestigious series of monographs on British Pleistocene fauna, and began with *Felidae*, written jointly with William Ayshford Sanford (1818–1902), another prominent early member of our society but, in contrast to Dawkins, a country gentleman who could pursue his geological studies without needing financial support.

In 1869 Dawkins was appointed curator at Manchester Museum, which was being transferred from the Manchester Natural History Society to Owens College. In 1872 he added the title of Lecturer in Geology, and in 1874 became Professor of Geology and Palaeontology. He worked incessantly at the museum, on popular books and lectures, and continued cave exploration, in North Wales and the North of England. In 1874 came a major book, *Cave hunting*, which was highly successful and achieved widespread recognition. In 1875, he travelled to Australia to assess a mining proposition for a group of Manchester investors. He discovered that it was a total fraud, and was apparently lucky to survive with his life.

At this point four whole chapters, followed by the final chapter, are devoted to cave exploration at Cresswell Crags in Derbyshire. The affair is too complicated to follow here, but a prolonged, bitter and public dispute arose over whether two individual objects, an engraved bone and a feline tooth, were genuinely found in the significant stratigraphical contexts claimed for them, were placed there after turning up in the spoil heaps (the author's provisional preferred view), or were even introduced by the excavators or a third party from outside the site altogether. Dawkins entered the fray with enthusiasm, always maintained that the discoveries were genuine, but has suffered reputational damage ever since.

Returning to the main narrative, Dawkins published a second major book, *Early man in Britain* in 1880, and in the same year undertook a lecture tour in the United States. He then wrote a highly critical review of James Geikie's book, *Prehistoric Europe*, challenging its (in hindsight

correct) proposition that there were a series of glacial and inter-glacial cycles. Another robust exchange of views followed.

From that time onwards, Dawkins 'threw himself into commercial geology, acting as consultant and advocate on projects ranging from the Channel Tunnel, the Manchester Ship Canal and Dover coal,' securing substantial remuneration and wide public recognition.

This book is not always the easiest of reading, but it makes a significant and worthwhile contribution to our knowledge.

DAVID BROMWICH

Church House, Crowcombe – a history, by Peter Menneer and Catherine Brew, published by Church House, Crowcombe, and available from Crowcombe Community Shop, £5. Visit www.churchhousecrowcombe.org.uk ISBN 978-1-5272-0501-7

In his foreword to this publication, James Weir pays tribute to the local volunteers who have produced a very useful piece of work, lavishly illustrated with colour photographs and historical monochrome pictures.

The readable and informative text covers the history of the building in considerable detail and, in doing so, illuminates the changing patterns of village life.

Crowcombe Church House was probably built during the late fifteenth century when 'Church Ales' ceased to be held in parish churches. It became the focus for the market and the three-day fairs that formed the nucleus of village life, brewing beer and baking bread for high days and holidays.

The relationship between Church House and the Carew/Trollope family is tactfully documented. There were occasions when a degree of difficulty arose between 'village' and 'manor' concerning ownership of the building and access to certain of the external walls.

Later on, the ground floor became a 'Poor House' and was maintained as such by the village until 'the poor' were re-located to the Williton Workhouse in 1838. The upper floor was used as a school, initially for boys only but latterly for girls as well, until the opening of the Village School in 1872.

Thereafter, a series of surveys detail the delapidation of Church House followed by

determined attempts at restoration and alteration thanks to the efforts of the Rector, the Reverend Henry Christian Young who, in 1910, established a Charity, with very respectable trustees drawn from Church of England dignitaries, to oversee its management.

The copies of bills, letters, plans and other documents relating to this period are clearly reproduced and the final pages display photos of a selection of the activities hosted by this facility.

The list of references is extensive and useful and the acknowledgements bear witness to the many contacts made by the authors in preparation of this text.

MARILYN CROTHERS

The Most Perfect Thing, by Tim Birkhead, Bloomsbury, 2016, 288pp., 15 col. photos., 15 line illus., bibliography, glossary, index. Hbk £16.99, Pbk (2017) £9.99. ISBN 978-1-4088-5125-8 (Hbk), ISBN 978-1-4088-5127-2 (Pbk).

The author is a professor of animal behaviour with a special interest in birds. His research interests have taken him to many parts of the world. He has long had a particular interest in the Common Guillemot, beginning his work on the island of Skomer in 1972, and following this up each year since. It appears that Birkhead was upset when he saw a natural history TV programme and the presenter demonstrated how a Guillemot's egg can be spun horizontally on its long axis: he pointed out that the presenter was using a blown shell without its natural contents and devoid of thick faecal coating. This led Birkhead to research the question further, with special consideration given to the very pointed shape of a Guillemot's egg.

It was generally thought that the pointed egg shape enabled it to roll in an arc, so preventing it from falling off its ledge. But Guillemots make no nest, with pairs laying their single eggs on very narrow ledges, so dislodging an egg could still lead to disaster if the ledge is narrower than the egg's rolling arc. Incidentally, the egg is turned periodically by the female, which must be a delicate process on such a narrow ledge, but sticky droppings are possibly of help here.

Aided by helpful diagrams, egg formation from ovary to shell gland, and later to the vagina for laying, is well and clearly described, although the process is far from being simple and varies in detail

according to the bird species. Essential to the egg is its calcium carbonate shell; basic colouring is then added, followed by coloured spots or streaks, all depending on the species of bird. In addition, shell construction must allow for the formation of pores, permitting the embryo to breathe and humidity to be controlled. It follows that loss of gases must be reduced as altitude increases; remarkably, poultry researchers have shown that chickens breeding at high altitudes have eggs with fewer and smaller shell pores.

How do female birds find the extra calcium when forming eggs? Birds-of-prey, sea birds and owls swallow their prey whole so there is no calcium problem there. But do other birds use smell or taste in finding calcium? It seems that with many birds the hen goes to roost with the gizzard crammed with fragments of snail shell. So, if there is a shortage of snails, as happens with acid rain, egg-shells may become defective. This condition has been studied in Holland, where it was noted that Great Tits had shell defects or failed to lay at all. Interestingly, Pied Flycatchers, and probably other species as well, get their calcium supply by eating millipedes and woodlice; so why are Great Tits unable to do this? Egg-shell quality is vital for the laying bird and long known to poultry breeders, who supply calcareous grit in some form. Then, there is the important topic of shell-thinning, caused by the ingestion of some insecticides: as expected, there is a full discussion of the matter.

One chapter is given over to egg shape. Why do owls, for instance, lay spherical eggs while most waders (and Guillemots) produce pyriform ones? X-ray studies on chickens have shown that egg shape is determined by the contours of the shell membrane. The question of the Guillemot's egg shape and its apparent stability on a narrow cliff ledge is one that continues to fascinate the author, but there are still no conclusive answers.

Throughout the book, the author cites relevant egg research, both historical and modern, in an entertaining and often amusing manner. This is certainly the case regarding shell colour and the pigments involved. Thus, why is the egg of the Song Thrush such an attractive blue, and why is it spotted in black? Furthermore, how are these black spots often so well defined, and not smudged at the edge? Some eggs have black hair-lines, such as are often seen at the larger end of a Sedge Warbler's egg; then there are the scribbled dark lines of varied thickness found with the egg of the Yellowhammer, and perhaps with pigments which

have clearly seeped into the background. Another question is that of palatability in relation to colour: one researcher offered scrambled eggs of different wild bird species to a panel of human tasters, with interesting results!

As birds' eggs can be so colourful, one might have expected the book to contain a striking series of colour photographs. There is certainly a most attractively coloured Guillemot egg photograph, but it is enlarged; in contrast, other British eggs shown are reduced in size. Other eggs illustrated include full clutches of certain American and African birds; a chance has been missed to display the full beauty of British eggs, such as Bullfinch, Ring Ouzel or Mistle Thrush.

Even so, this is a good book, with a wide review of egg-related research, and history. I even found an account of how serious egg-collectors blow, or used to blow, their eggs using a drill and angled blow pipe. Collectors ensured that the egg contents were not wasted: with larger eggs, the yolk and albumen would be scrambled for supper! It appears that the blowing of eggs using a pin-hole at each end was only for schoolboy amateurs. An excellent book, and at £16.99 for the hardback, or £9.99 for the recently issued paperback, I would certainly recommend its purchase.

PHILIP RADFORD

The Cuckoo: The Uninvited Guest, by Oldrich Mikulica *et al.*, Wild Nature Press, Plymouth, 2017, 158 pp., numerous col. photos, Hbk £24.99. ISBN 978-0-9955673-0-6.

The Common Cuckoo (*Cuculus canorus*) is an important bird in Somerset. It is still a harbinger of spring, but only in some parts of the county; elsewhere, the decline in numbers has meant that, sadly, the bird is now rarely heard. Of course, the cuckoo is a nomadic bird; it only remains in one area for breeding purposes or while moulting. The book contains some outstanding Cuckoo photographs, taken in the field by Oldrich Mikulica, mainly in the Czech Republic and collected over several years. Actually, the authors of the very readable text make a truly international team. The book's foreword is by Nick Davies, the Cambridge Cuckoo researcher who has long studied the species at Wicken Fen, while some parasitized egg clutches were photographed at the Natural History Museum at Tring.

As for the authors of the text, Karl Schulze-Hagen is a German gynaecologist and a keen Cuckoo researcher, Bard Gunnar Stokke works at the Norwegian Institute for Nature Research, while Tomas Grim is Professor of Zoology at Olomouc in the Czech Republic. The photographer, Oldrich Mikulica, is a retired engineer who lives in Luzice in the Czech Republic. Clearly, over the years, he has accumulated a remarkable series of photographs of Cuckoo eggs and young in the nest, as well as action photographs of both juvenile and adult birds in various habitats.

Cuckoo biology (including anatomy, food details, mating, migration patterns) is described in some detail, as well as brood-parasitism more generally around the world. Necessarily, host defences are important topics, as well as methods adopted by the bird parasite to outwit them. Then, being very up-to-date, the value of both radio tracking and genetic analyses is emphasised. The authors accept that individual female Cuckoos belong to a particular bird tribe or 'gens' (plural 'gentes'); it is now known that accurate egg mimicry is essential if the Cuckoo's egg is to be accepted by the host. However, interestingly, the Dunnock, with its pale blue eggs, is an exception as it will readily accept Cuckoo eggs of any colour or pattern. Nest structure too plays its part: is the nest of a potential host able to support a growing and active young Cuckoo?

Without doubt, female Cuckoos are remarkable in the bird world, having to search for the nests of other birds and then lay their eggs in the afternoon and spend only a few seconds in doing so. The Cuckoo exchanges its own egg for one already laid by the host, with the latter providing an easy meal. The egg itself, apart from its mimetic pattern and colour, is relatively small for a bird the size of a Cuckoo, and it is thick-shelled too, so it can stand rough treatment. There is also the hen Cuckoo's hawk-like plumage to consider; is this helpful for the bird?

Regarding the introduction of the egg into the host nest, there is a valuable series of nest photographs of Reed Warbler and Great Reed Warbler, showing the parasitic egg. Furthermore, I was interested to read of the variety of host species to be found in central Europe which includes Red-backed Shrike, Crested Tit and Barred Warbler. Considerable attention is given to the view that the structure of chick begging-calls is distinct for each Cuckoo 'gens' or tribe, also to the similarity of the parasite's begging calls to that of a whole brood of nestlings. Another begging stimulus appears to be

the raising of one wing: certainly an idea new to me.

I was glad that the authors paid tribute to Doctor Edward Jenner, the discoverer of the smallpox vaccination who, in the 18th century, first described how a newly-hatched young Cuckoo will eject host eggs or nestlings over the side of the nest. In general, the Cuckoo story, as described in the text, makes lively reading; I liked this colourful passage: "For 12 days the Cuckoo egg has been a slumbering time bomb, and the emergence of the Cuckoo chick triggers its detonation..."

The Common Cuckoo is very much an international bird and, probably, its decline is related to hazards in many parts of its range. For up-to-date Cuckoo research information, and for some remarkable action photographs of the species, the book is certainly recommended for purchase; it will interest any naturalist. There are, however, two possible omissions. The volume has no index and no bibliography; I think the book's value would have been increased by their inclusion.

PHILIP RADFORD

Falcons, by Richard Sale, Harper Collins, 2016, 594pp., illus. with more than 200 col. photos, numerous maps, diagrams, references, index. Hbk £65, Pbk £35. ISBN 978-0-00-751141-9 (Hbk), ISBN 978-0-00-751142-6 (Pbk).

Richard Sale is a physicist, with a PhD in astrophysics. He has worked as a glaciologist in Switzerland, but has now returned to a previous passion in birds. Being a physicist, he is well qualified to consider aspects of flight and aerial hunting as applied to falcons, including aerodynamics with its necessary mathematical background. Some readers might be alarmed to see mathematical equations quoted and discussed in a natural history book, but helpful and clear explanations are given.

Britain has four falcon species, each with different habits, prey preferences and habitat ranges. Thus, Kestrels mainly hunt small mammals, but do not ignore small birds, earthworms, amphibians and insects, while Hobbies take mainly insects as well as the occasional young Swallow or Swift. The diminutive Merlin targets small birds but, surprisingly, will sometimes seize Cuckoos or Green Woodpeckers as well as insects or small mammals. The larger and more powerful Peregrine specialises in preying on pigeons with its high-speed

stoops; some Peregrines hunt bats at dawn, and waders are often taken at estuaries. Interestingly, it seems that Peregrines will take advantage of city lighting when hunting night-time migrating birds; a night photograph of Bristol's Suspension Bridge in the Avon Gorge, where Peregrines nest, draws attention to this behaviour.

In Somerset, one can observe Peregrines, Hobbies in summer, and Kestrels, but it is doubtful if any Merlins now breed on Exmoor. Sadly, Kestrel numbers have been in decline recently too; a few years back, Kestrels could be watched hovering over motorway verges, hunting for small mammals, but now this is becoming an unusual sight. Why the decline, so putting Kestrels onto the British Trust for Ornithology's 'Amber' list? Is the reduction due to increasingly intensive farming methods, or poisoning, or the increase in Buzzards and, possibly, Goshawks? Hobbies, however, as summer migrants and insect-feeders, have increased, notably over the Somerset Levels, with dragonflies as the main prey group. Is climate change involved here?

Falcons are vocal birds during the breeding season, each species with typical high pitched 'kek-kek-kek' calls. An alarmed Peregrine can produce notes which are really penetrating in character. Sounds made by the other three species are of lower amplitude and there are variations in note detail. I found that voice differences were fully discussed as, for instance, in the whining calls made by the falcon females when begging for food from their mates. So often, in bird books, songs and calls are overlooked or largely ignored.

Importantly, the question of pesticides and herbicides in relation to birds-of-prey is considered in depth. DDT, aldrin and dieldrin were highly effective insecticides but also poisoned the birds which fed on the insects and, in turn, affected the predatory birds which ingested these easy targets. This led to the sad story of egg-shell thinning, although the situation improved significantly when the older pesticides were banned. However, it seems likely that the new insecticides, the neonicotinoids, may well be more harmful to birds than first thought and, alarmingly, perhaps to bee populations as well. Will the recent increase in breeding Hobbies, which are largely insectivorous, be adversely affected by the use of these chemicals? If they are, then it is likely that the other three falcons, indirectly, will be at risk too.

This is a book the naturalist will want to read through and, also, keep for reference, so a serviceable index is essential. Happily, I found

the index excellent; no doubt, a lot of hard work went into compiling it. I have a complaint with my paperback edition: the book will not remain open, which I find most annoying. Still, I recommend the volume. It will be an asset in the library of anyone interested in nature's balance and British bird life in general.

PHILIP RADFORD

The Wisdom of Birds, by Tim Birkhead, Bloomsbury, 2010, 437 pp., numerous col. and b/w illus., bibliography, glossary, index. Pbk £20. ISBN 978-0-7475-9822-0.

I am certainly inexcusably late in reading this book, originally published in hardback in 2008 and appearing as a paperback in 2010. The author is professor of animal behaviour and the history of science at the University of Sheffield. Clearly he has been seeking to understand how birds live throughout his working life and, also, how our present knowledge of birds was gradually laid down. Even so, modern ornithology poses many questions still to be answered: as one example, Aquatic Warblers copulate for up to thirty minutes, yet with most species male and female are together for just two or three seconds. Why the difference?

Two of the author's past heroes are John Ray and Francis Willughby, noted for their joint encyclopaedic volume, *The Ornithology of Francis Willughby*, published in 1678. Later, in 1691, Ray published *The Wisdom of God*; and it was Ray who first wondered if the autumn restlessness of caged Nightingales could be linked with an impulse to fly south. Ray was probably the first scientific ornithologist, in addition to his great interest in many other branches of natural history. Indeed, it was John Ray who challenged many of the widely-believed bird myths of the time. Does a croaking Raven really mean that a death is in the offing? How can a suspended dead Kingfisher turn its breast to face an approaching storm, so acting as a weathercock? Interestingly, Francis Willughby and John Ray soon found another person sympathetic with their views, Sir Thomas Browne of Norwich. Other early authors generally followed the teachings of Aristotle, but Ray believed that nature itself should be studied as well as books.

In their writings, Ray and Willughby aimed to give accurate descriptions of birds, and to offer a classification of species based on these

descriptions. Fables, morals and ethics had no place in their work. The value of observation in the field began to assume greater importance. Ray wrote in Latin, in which he was fluent; clearly he was widely educated and in 1649 he was appointed to teach mathematics and Greek at Cambridge. He was ordained in 1660, but as he refused to agree to the new Act of Uniformity, he had to leave the Church and also Cambridge. In consequence, he was able to go travelling with the wealthy Willughby, both in Britain and across Europe. For his natural history observations, Ray was elected a fellow of the Royal Society in 1667. The bird encyclopaedia ascribed to Willughby was first published, in Latin, in 1676, even though Willughby had died in 1672, aged 37. The English translation, referred to earlier, appeared in 1678.

Observations on the egg have been of interest historically as, using hens' eggs, fertile and infertile eggs appeared identical. Semen and spermatozoa could not then be identified in fertile eggs, in spite of lots of searching. It was van Leeuwenhoek (1679), using a simple lens microscope, who first demonstrated that bird semen contained spermatozoa. In due course, Ray concluded that spontaneous generation did not occur, posing the question as to why there were two sexes in birds and other animals, each sex having a different anatomy.

Academically, the study of bird behaviour did not start until the 20th century, including studies of bird instinct and intelligence. This also included the study of *imprinting*, where (for example) a gosling will follow the first object it sees, which is normally its mother. Apparently Pliny knew of bird imprinting; also, in the 7th century St Cuthbert on Holy Island hand-reared Eider Ducks, which would follow him and seek his protection if there was danger. Interestingly, it appears that if imprinting does not occur in the first three days after hatching it will not take place at all. Remarkably, an Australian researcher described how hand-reared, imprinted Zebra Finches attempted to copulate with him and even ejaculated sperm onto his finger!

Accounts of possible bird migration, or hibernation, were circulating for hundreds of years in Europe, and it was generally accepted that large birds such as White Storks did migrate, and often in big flocks. Yet even in the 18th century, Swallow hibernation was still considered possible by some naturalists, including Gilbert White of Selborne. This was in spite of John White, based on Gibraltar, regularly sending his brother details of the seasonal passage of Swallows over the Straits. Possibly

Gilbert White was influenced by the adverse migration views of his naturalist correspondents, Thomas Pennant and Daines Barrington.

What is the influence of day length on birds? This is a big subject, and one which has often been the subject of experimental manipulations to influence song periods, migrations and moults. Furthermore, how were bird hormones discovered, and how do hormone secretions vary through the year? Certain hormones are clearly linked with breeding seasons, and if birds are to breed successfully they must have young in the nest when food is most abundant – the stimulus here appears to be day length.

In this book another aspect of bird life, considered historically, is that of territory, with emphasis on the pioneer writings of Eliot Howard in the early 20th century. Whistling Bullfinches and thoughts on bird song by Daines Barrington are also discussed. For song to occur, birds need the hormone testosterone, secreted by the testes; but, amazingly, Australian Zebra Finches can secrete testosterone from the brain – meaning that these birds can presumably manage very well without testes!

Tim Birkhead writes in a most entertaining manner, and the book is lavishly illustrated. Apparently the author spent two years in locating suitable images, searching both private and academic collections. Most of the illustrations date from before 1800, and originate from many parts of the world. Some chapters contain material which the author also used when writing his two more recent works, *Bird Sense* (2012) and *The Most Perfect Thing* (2016). The former volume was reviewed in *SANH* 156, while the latter is reviewed here. I found *The Wisdom of Birds* a most enjoyable read, and would recommend a purchase for anyone with a serious interest in birds. At £20 for the paperback edition, it is good value too.

PHILIP RADFORD

Slugs and Snails, by Robert Cameron, HarperCollins, New Naturalist Library No. 133, 2016, 508pp., numerous graphs, diagrams, illustrations and col. photos, reference list, index. Hbk £65, Pbk £40. ISBN 978-0-00-711300-2 (Hbk), ISBN 978-0-00-711301-9 (Pbk).

The Editors of the New Naturalist Library, and of course Robert Cameron, are to be congratulated on the publication of yet another magnificent and

beautifully illustrated volume in the series. Who would have thought that terrestrial slugs and snails (marine and freshwater species are not considered) could be so interesting? After all, a significant proportion of the British human population is only concerned with killing them!

The reason behind that reaction is identified in the chapter *Staying Alive*. Along with all other animal life, slugs and snails must eat other biological matter (food) in order to stay alive; but the distinctions between carnivore, herbivore and omnivore are less marked in these animals than in some other groups. As it says on p. 143, “The great majority of slugs and snails have a diet consisting mainly of plant (or, more strictly, not of animal) material.” In other words, they are mostly feeding on dead vegetation that is being decomposed by fungi.

Curiously, in natural habitats – as opposed to gardens and horticultural crops – they appear to consume but a small proportion of the food available and have little effect on living plants. Generally speaking, slugs and snails are deterred by the natural defences of living plants. As we are similarly deterred by those same defences, we have genetically modified our cultivated vegetables (by plant breeding) to nullify their effect – and, by so doing, have provided slugs and snails with a welcome addition to their diet.

Those gardeners who attempt to control numbers by throwing snails ‘over the garden wall’ should read p. 183 which reports on an experiment, extending over two summers, in which snails were individually marked before being thrown about five metres over a wall and fence. Large numbers returned to the garden, sometimes within a fortnight; many were thrown out more than five times and some 17 times! But only three out of 151 transported 20 metres to another garden returned to their garden of origin, while snails moved 100 metres showed no homing ability at all.

At its heart, this is a natural history book, treating all aspects of its subject’s lives in much the same way as other titles in the series have treated the lives of, say, birds. Accordingly, it uses the same language – sometimes to startling effect. In decades of teaching students about (marine) snails, it never occurred to me to pay much attention to ‘courtship and mating behaviour’ or to apply terms such as ‘semelparous’ [breeding only once before death] versus ‘iteroparous’ [breeding several times] to this group of animals.

It was interesting to note that, even in Britain,

individuals of the largest snail species weigh 10,000 times more than individuals of the smallest, when both are mature. For a marine snail, living beneath the tidemarks, the protective advantage of a shell clearly outweighs any impediment to mobility and calcium salts are superabundant in the water. That so many different groups of snail have adapted to life on land demonstrates that possession of a heavy rigid shell still confers a practical advantage to its owner.

I found the chapter *Invasions, Extinctions and Conservation* absolutely fascinating – although it posed more questions than it answered. The spread of the Collared Dove, *Streptopelia decaocto*, from the Caucasus to Britain in the 1970s was one of the ornithological events of the decade. Less publicised was the similar spread across Europe of the, usually subterranean, Worm Slug, *Boettgerilla pallens*, or “Bert Gorilla”, as it was immediately dubbed by its first collector in West Somerset. It is easy to understand how the Collared Dove was able to spread across Europe, less easy to see how the Worm Slug, lacking the power of flight, could undertake a journey of similar magnitude. Presumably its spread (and its colonisation of the UK) was greatly aided by movement of horticultural and agricultural goods.

The Editors see this book as a milestone in the popular appreciation of slugs and snails; I hope that they are correct – they have certainly done their best to provide one. The text reveals all sorts of interesting facts: speaking personally, I am delighted to have learned, at long last, how the garden snail, *Cornu aspersum*, leaves a track of isolated dots (‘footprints’) instead of a continuous slime trail.

JOHN CROTHERS

Shallow Seas of Northwest Europe, by Peter J. Hayward, HarperCollins, New Naturalist Library No. 131, 2016, 401pp., numerous graphs and colour photographs, reference list, index. Hbk £60, Pbk £40. ISBN 978-0-00-730729-6 (Hbk), ISBN 978-0-00-730730-2 (Pbk).

We are terrestrial animals and so it is not surprising that we have discovered much more about the terrestrial habitats of our Islands, and their fauna and flora, than we have of marine habitats. The New Naturalist library has reflected that bias: most of the previous 130 titles are concerned with the land. The

six ‘Islands’ titles also concentrate mainly on the dry bits, as do *Sea Birds*, *Terns* and *British Seals*. There were just four marine titles in the series before this ground-breaking volume appeared; two on sea shores and two on the open sea, and this is the first opportunity most of us will have had to explore the sea bed below the tide marks.

I saw a published review of this book (*British Wildlife* 26, 301-2) before I had had a chance to read my own copy. The reviewer, Peter Marren, found the work too academic for his taste and came across too many unfamiliar technical terms. He concluded that the Editors needed to decide on the target readership for the series – was it to be university students and their lecturers or the interested lay public?

He has a point – especially concerning the captions to several of the graphs, which are not self-explanatory – and I, too, looked rather blankly at Fig. 36 (a graph of cumulative percentage weight of the sample plotted against the phi number). But I think Peter Marren gave up too quickly, probably because he was writing to a tight deadline.

Shallow Seas is a very valuable compendium of information about an essentially alien habitat which exists all around us and affects all our lives. It is a worthy member of the New Naturalist library, but I agree that Chapter 2, *The Benthic Environment*, is not a light read. Perhaps the details should be left until you have read the last chapter and realise why an appreciation of, for example, the AMO – the Atlantic Multidecadal Oscillation – helps to explain faunal changes. The first chapter, on the other hand, is an interesting historical review of the scientific investigations of our offshore environment. Inevitably, they were initiated long after our ancestors had commenced exploiting its riches. We can but imagine the starting point.

Chapters 3 and 4, *Mud, Sand and Gravel* and *Hard Grounds*, describe the fauna associated with the two most widespread habitat types; much of the fauna lives in the former or on the surface of the latter. Below about 10m depth, light penetration is insufficient to support seaweed growth and the food webs depend on detritivores rather than herbivores. The primary producers, mainly diatoms, live in the plankton and the bottom fauna depends on the detritus that falls to the sea bed.

The following two chapters, *Kelps and Sea Grasses* and *Maerl Beds and Biogenic Reefs*, deal with those habitats where there is sufficient light for photosynthesis. (‘Biogenic reefs’ include reefs of worm tubes cemented together – such as those

seen at extreme low water between Doniford and Hinkley Point.) I found the section on maerl absolutely fascinating. Anyone who knows the lower shore of Hurlstone Point will be familiar with the encrusting coralline algae that cover the rock surface in a pink film. Maerl is essentially broken-off pieces of similar algae that survive being rolled around by water currents.

But the truly valuable chapter, that I expect to refer back to again and again, is the final one on *Time and Change*. I think of all the other chapters as providing the background material for the 'meat' that is reviewed here. Central to this final section of the book is an appreciation that the 'British' fauna is, and probably always has been, in a state of change in response to the various long-term cycles described in Chapter 2. As the onset of an ice age moved the fauna south so that of an interglacial reversed the process – leaving behind empty shells etc. as evidence. (Which is why compilers of fauna lists should confine themselves to records of live animals.)

An alternation in the abundance of Herring and Pilchard catches has been noted since the 16th century. Herring, a cold water species, may reach as far south as the western approaches to the English Channel. At such times, Pilchards reach their northern limit in much the same place. A huge Herring fishery developed in Scotland in the late decades of the 19th century, started to decline in the early 20th, and had collapsed by 1930. The perceived wisdom that I absorbed in the early 1960s was that this had been the result of overfishing.

Peter Hayward, however, ascribes that collapse to a change in the AMO; the Herring shoals were shifted north of British Waters. A Pilchard fishery developed in the south-west to take its place. More recently, Pilchards have declined and Herrings have been making a comeback. The Herring/Pilchard oscillation, along with its associated planktonic support, is now known as the Russell Cycle.

Superimposed upon this complex of 'natural' cycles, caused or influenced by factors far beyond human control – such as sun spots – are changes due to human activity. There are species acting as though they are members of the native fauna that were originally introduced for mariculture, and many more were introduced unintentionally at the same time or in the ballast water of bulk carriers. I was intrigued to read of the unknown number of species, once presumed to be native and rare (and so worthy of special conservation efforts in some cases), whose world-wide distribution is highly suggestive of unintentional human-aided introductions before anybody was interested in such things.

But the section that I hope will be read by anybody and everybody connected with the management of fisheries comes near the end when Peter Hayward reviews the unintended consequences inflicted on the sea bed through the use of various dredges and trawls. It's amazing that so much of our shallow water fauna is still there.

JOHN CROTHERS

Book reviews and Proceedings of the Society for 2016

Extracted from the Proceedings of the Somerset Archaeological and Natural History Society for 2016.

Volume 160

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Produced in Great Britain by Short Run Press, Exeter.

ISSN 0081-2056

SOMERSET ARCHAEOLOGICAL AND NATURAL HISTORY SOCIETY

ANNUAL GENERAL MEETING 2016

CHAIRMAN'S REPORT

The key objective for SANHS Board of Trustees' this year was to ensure the continued smooth running of the Society. Board meetings have concentrated on planning for the future: a special meeting of Trustees in December focused on reviewing progress with the Strategic Plan, while the discussions at the January Board emphasised the importance of Trustees contributing to the implementation of the strategic plan. Over the past few years a key issue for SANHS has been the disruption caused to the business when volunteers stand down from key work areas. A major objective for the Board has been to secure the long term future of SANHS by improved succession planning and the development of a forward-looking business plan. Much of this "future-proofing" work has been pushed forward by the excellent work of the Honorary Secretary Andrew Butcher, who has been the driving force in planning the future of SANHS.

Sue Kerry our new Office Manager has successfully taken on the complex role of supporting the various activities of SANHS. Sue is involved with many aspects of the day-to-day running of SANHS and working closely with our new treasurer Mary Claridge. Together they have been developing improved financial management systems for the organisation. Like many small charities SANHS is completely dependent on a small band of dedicated volunteers. These members undertake a wide range of vital jobs including preparing and sending out membership cards, keeping the website up-to-date, organising successful events, giving great lectures and much more. New volunteers are always welcome, so if you feel you would like to help out the Society please feel free to contact the office for suggestions how you can get involved with the work of SANHS.

As in previous years SANHS continued to organise successful events on a range of topics of interest to the membership and the general public. At the AGM in September 2015 our President Bob

Croft gave an excellent talk and film show on the sensational archaeology discoveries of the site for the proposed nuclear power station at Hinkley Point. A series of talks by Jerry Sampson on Somerset churches have been extremely well received and supported by large numbers of members and the general public. The Annual Archaeology day, this year held in Weston-Super-Mare, was also a great success, as was the SANHS support with a book launch on "*The Birds of Exmoor and the Quantocks*".

One of the outstanding issues from earlier in 2015 was the need for better management of the SANHS estate, especially the Keep Gardens in the grounds of Taunton Castle and the Castle Hotel. Early in 2016 the work to remove dangerous trees was completed. This work is now being followed up by the development of a management plan for the gardens. This plan outlines the need for ongoing work to stabilise the walls and gateways of this listed monument. It is hoped that improved planting and removal of ivy from the walls will transform the Castle ruins and gardens to give a quiet garden to the patrons of the Castle Hotel and visitors to the Museum of Somerset.

SANHS works with many different organisations across the county of Somerset: working closely with our partners is already something we do well. SANHS Library and Museum Panels continue to work closely with officers from the South West Heritage Trust (SWHT). During this year we have supported the conservation of two important paintings from the Society's fine art collection. Once restored these paintings will be displayed in the newly refurbished Somerset Rural Life Museum in Glastonbury. However Trustees recognise there will always be room for improvement in supporting our partners. In October I attended the Associated Societies Annual Meeting, following a series of talks on Cadbury Camp there was an interesting debate on a wide range of issues relevant to both SANHS and the Associated Societies. I believe that SANHS has a greater part to play in ensuring the