

BOOK REVIEWS

The Emerald Planet, by David Beerling, Oxford University Press, 2007, 288 pp., 16 b/w ills, 13 figs, £14.99. ISBN 978-0-19-280602-4.

David Beerling is Professor of Palaeoclimatology at Sheffield University and, from his text in this book, he should be credited with being Professor of Palaeobotany as well; evidently he has long had a special interest in plants and how they evolved on earth. Still, climatology and botany are necessarily closely entwined. The author approaches the theme by considering the scientific contributions of pioneer physicists and chemists as well as fossil experts and hunters. I found that that this combination, with an easy style of writing, made for quite entertaining reading. Moreover, the work is scattered with quotations, mostly carefully chosen, from scientists of various disciplines, and which I thought helped along an account of biological evolution which spanned a daunting 500 million years. When I first saw the book, I did not expect to enjoy the read, but I soon found the broad picture fascinating and of real importance in this over-populated and competitive world. Most of us see green leaves of some sort every day but how often do we think of their history and evolution? Apparently, plant leaves took 40 million years to evolve, and reasons are cited for this estimate, with references being given for most of the major steps along the route. The fossil record for plants is meagre but those of importance are well described. Also, I was interested to see a photograph of one of the really early vascular land plants, and to contrast this with one of the first plants to bear leaves, and which was dated to about 370 million years back, in the Devonian period. It seems that the early vascular plants evolved when there was far more carbon dioxide in the atmosphere than nowadays, and also with very warm climatic conditions. But, when carbon dioxide concentrations fell dramatically, so leaves began to evolve, with evidence based on chemical analysis of fossil soils. I must confess that previously I was quite ignorant of the results of this important research into earth's history.

One chapter contains a helpful discussion regarding the increasing emission of greenhouse

gases following the onset of the industrial revolution, particularly in relation to carbon dioxide and methane; this, combined with continued destruction of tropical rainforests must lead to a warmer climate, and certainly an unstable one. Rainforests, and all green plants, take up carbon dioxide and produce oxygen; world industry produces carbon dioxide and it must not be forgotten that volcanoes do so as well. One may wonder what effect the increased amount of carbon dioxide from industrial processes had on plants. Important research, using Victorian herbarium collections, showed that leaves had fewer pores, or stomata, as carbon dioxide levels rose in the atmosphere; I suppose this might have been predicted, but it happened surprisingly quickly. Leaf pores regulate the uptake of carbon dioxide and also the loss of water by transpiration, with transpiration playing an important part in cooling the plant. Research tools mentioned are certainly up-to-date, including that of spacecraft exploration; here, I was interested to learn that by this means it had been shown that the earth's atmosphere contained far more methane than had been expected. This result is now explained by understanding how much methane gas is produced by bacteria in swamplands and rice paddy fields.

Polar explorers have recovered fossils which show that forests once occurred at regions in both the Arctic and Antarctica; this was linked with the warm conditions of the Eocene period of around 50 million years ago. Such ice-free conditions are very difficult to explain, but the matter is fully discussed and several scientific references are cited; this sounds rather dull but, in effect, it makes quite a stimulating read. Also well discussed are the enigmas of the ozone layer of the atmosphere, and the shock discovery of an ozone hole over Antarctica in 1985. The thin ozone layer shields the world from excessive and dangerous ultraviolet radiation; probably, without ozone protection, plants and animals could not exist on earth. Although ozone only contains oxygen atoms, it is a poisonous gas and cannot support life. Apparently the earth needs ozone to survive but not in excess so, clearly, a balance is necessary. Remarkably, oxides of nitrogen, as produced by soil bacteria, appear to act as catalysts

in ozone destruction, acting even at the height of the stratosphere.

Without doubt, many of us are ignorant with regard to plant evolution and palaeobotanists have so much more to discover; however, the book does summarise present-day knowledge on the subject which surely, is a vital one for our planet. If you want to read up basic ideas on the problem, I can recommend the book. I thought at first that the work was not relevant to Somerset, and certainly there are no references to Somerset plant fossils, yet we do have our woodlands, meadows and wetland reed-beds. However, as I admired the greening beeches and sessile oak-woods on the Quantock Hills this springtime, I concluded that there is every reason to be aware of plant evolution. The welfare of plants depends on the atmosphere, and the activities of man so influence its composition; we cannot ignore the facts shown by analysis of bubbles of air trapped in ice cores. These bubbles give added proof that the concentration of carbon dioxide in the earth's atmosphere began to increase late in the 18th century. The book's last chapter is one of prediction, and speculation, for the century, and centuries, ahead; aptly, this has the heading 'Through a glass darkly'.

PHILIP RADFORD

Grouse, by Adam Watson and Robert Moss, Harper Collins, New Naturalist Series, 2008, 529 pp., 199 pls, 34 tables, £50. ISBN 978-0-00-715097-7.

This work covers Britain's four grouse species, which include the goose-size Capercaillie, Red Grouse, Ptarmigan and Black Grouse. Of these birds, only the Red Grouse and Black Grouse have lived and nested in Somerset. Following introductions, Red Grouse bred scantily, and were hunted, in the Dunkery area of Somerset, even up to the late 20th century and, further, a few were occasionally seen over the Quantock Hills; unfortunately, it seems that the bird is now extinct in the county. At present, there is probably too much moorland disturbance for either species to be reintroduced to Somerset with any prospect of success. In the 1980s I recall seeing Red Grouse almost regularly around Dunkery and finding their characteristic cylindrical droppings too; it would be a delightful surprise to locate such droppings, comprised of undigested heather fibres, once again on an Exmoor walk. Still, even if grouse are no longer Somerset residents, the book is full of interest for anyone who loves moorland and likes to watch game birds. The volume is yet another

attractive *New Naturalist* publication, and written by two highly experienced grouse specialists who are based largely in Scotland, as one might expect. There are problems for all of Britain's grouse species, with food shortages, parasites and disease, and loss of habitat; without a good-sized population the game-bag must suffer and grouse-shooting is often big business.

Red Grouse live on moorland, much of which requires burning and grazing periodically, otherwise it will revert to scrub and, eventually, to forest. The birds need short heather as food, and tall heather to provide shelter and cover; also useful is blanket bog, which usually holds various insects and is necessary as food for the chicks. Feeding can be difficult in winter when there is snow cover; at such time, whortleberry stalks and tree buds are plucked and eaten. Red Grouse will sometimes perch in suitable trees, especially birch and willow, for access to buds and so, possibly, giving rise to opportunities for unusual photographs. Quite understandably, Red Grouse numbers vary considerably in Scotland from year to year; there is a full discussion as to the reasons for these variations and, of course, the question of the yearly shooting bag is important for local trading conditions.

For those who wish to study the Ptarmigan or 'mountain partridge' it is, sadly, no good to think of Somerset hills; even so, a winter birding trip to the Cairngorms could be combined with some winter sports. The Ptarmigan is white in winter and is the only British bird to have such a plumage; for summer, feather moults give rise to brown and grey speckling, although wings remain white. The Ptarmigan's plumage shows remarkable adaptations to living in harsh mountain conditions; feathers cover the feet and toes, and even the nostrils are protected. Without doubt, anyone engaging in winter Ptarmigan observations must be hardy and be a skilled mountaineer and skier as well! But there must be real birding rewards for such people; the sight of a cock Ptarmigan moulting from winter to summer plumage, growing red patches on the head and a dark brown feather necklace, must be memorable on a snowy rock-face, and even more so if a photograph can be obtained. Apparently, Ptarmigan chicks, even at a day old, can climb rocks and will escape from enemies by rolling, ball-like, down a hill and, also, they are able to swim; further, like their parents, the chicks have remarkable camouflage if they remain still in a depression in their mountain habitat. The food of the Ptarmigan includes berries, seeds, buds and heather shoots but, obviously, all depends on

the season; the chicks are led towards insects and suitable heather shoots by the hen parent. As with all grouse, Ptarmigan have their special enemies; probably hunters out with their guns, Red Foxes, Stoats, Weasels and Golden Eagles top the list over the Scottish Hills; also, disease processes should not be forgotten.

There is a fascinating section on the spectacular Black Grouse and its lek display behaviour; this can be observed if you get up sufficiently early at certain sites in North Wales, the Pennine Hills and, particularly, Scotland. Black Grouse have a wide variety of food and, interestingly, take birch catkins and twig shoots of alder, willow and hazel; in addition, heather and various berries are eaten too, as would be expected. In general, Black Grouse live in woodland fringe habitats, to include grassland and heather moors, but a few scattered trees are essential. Anyway, having arrived at a spring lek site well before dawn, you can expect to hear some unique vocalisations, as cocks display to a gathering of patient hens. Sounds include bubbling and resonant notes, hisses and clicks, uttered as the cock spreads his unique lyre-shaped tail. The book has several good lek colour photographs in illustration, and other notable Black Grouse pictures show the birds perched in birch trees, males in display and cocks in fighting mood. In the main, the book's photographs are of high quality and illustrate behaviour well; many of the photographers specialise in Scottish hill species, so they must be very dedicated people.

Some excellent photographs accompany the chapter on the Capercaillie too, especially those showing hens at lek, mating and preening. Capercaillie were successfully re-introduced to Scottish coniferous forests in the 1830s, but numbers have fluctuated considerably since then; the reasons for these changes, and the present distribution of the bird, are discussed in some detail. These days, Capercaillie are often killed by flying into deer fences, then Red Foxes, Pine Martens, Goshawks and Golden Eagles all succeed in capturing this very large grouse from time to time. The winter diet for the bird is largely of conifer needles, mainly of Scots pine and, in spring and summer, the growing shoots of various plants are taken, especially cotton-grass and, amongst berries, whortleberry (blaeberry in Scotland) is favoured. Even so, it appears that the Capercaillie is a real pine needle specialist; I have never met anyone who has eaten roast Capercaillie, but I would guess that the meat has a rather resinous flavour. As with the other grouse species, Capercaillie chicks and young hunt for insects, with

guidance by their mother; large caterpillars are known to be favoured. Like the Black Grouse, the Capercaillie is a lek bird and the displaying male makes some remarkable sounds, presumably to impress the hens and deter his rivals; drum-rolls, clicks and cork-popping are all part of the repertoire!

This is an attractive and well-written work on an important group of birds. Behaviour, snow-roosting, territory, plumage, habitats, predators and nutrition are all sections which are well-covered and also there is a useful chapter on management and conservation. Moreover, I liked the references to bird anatomy and physiology and interesting questions are raised; for instance, why do all grouse have so long a caecum? I found no faults with either the index or the bibliography; in my view, the volume is well worth a place in any naturalist's library, especially those considering visits to northern lands.

PHILIP RADFORD

Dragonflies, by Philip Corbet and Stephen Brooks, Harper Collins, New Naturalist Series, 2008, 454 pp., over 100 col. ills; numerous b/w ills and tables, £45. ISBN 978-0-00-715168-4.

The first *New Naturalist* book on dragonflies, by Philip Corbet, Cynthia Longfield and Norman Moore, was published in 1960 and, since then, a significant amount of fresh information has been gathered about these insects. Philip Corbet, as a co-author of the first book and a world dragonfly expert, was the obvious choice for authorship of the new volume but, sadly, he died soon after the book was completed; there is a fitting tribute in his memory written by Michael Parr of the Worldwide Dragonfly Association. Philip Corbet was the author of the major reference work: *Dragonflies: Behaviour and Ecology of Odonata*, published in 1999 and which covers dragonflies worldwide. The second author, Stephen Brooks, is an entomologist at the Natural History Museum, London, specialising in dragonflies; his *Field Guide to the Dragonflies and Damselflies of Great Britain and Ireland* is to be found in the rucksacks of many, perhaps most, amateur odonatologists. It would have been difficult for the publishers to have invited two better qualified specialist biologists to write a generalised dragonfly book, up-to-date for 2008. Much of the appeal of the book is due to the many excellent colour photographs, taken mainly by Robert Thompson. One memorable photograph, at least for me, shows an egg-laying Brown Hawker grasped by the larva of a diving beetle species: certainly this picture tells

a story and so do many of the other illustrations. Really the work is concerned with dragonfly natural history in Britain and this is covered admirably. The book is not intended to be an identification guide. As the authors state in their foreword, it is really written for 'the informed enthusiast'. Without doubt, both the experienced naturalist and the dragonfly beginner will find a lot of material to stimulate them here, later to consider their behaviour observations with the benefit of a digest of recent research findings.

Up-to-date distribution maps are provided for all British dragonfly species and which indicate range expansion or contraction; rarities too are included, with comments on the influence of climate change on migratory species. As I expected, there is a helpful and full glossary, which contains over 200 entries. Should you be puzzled, like me, with terms such as 'bank lurker', 'trivial flight', 'stealer', 'latency habitat', 'inclusive fitness' or even 'metapopulation', then the glossary will give you the answer. Again as I anticipated, I found a comprehensive bibliography, containing over 350 references and, to date, I have been unable seriously to fault the well-displayed index.

Examination of the index of the 1960 volume shows no mention of the topic of 'sperm displacement', but the present book contains quite a lengthy discussion on this important theme, giving the results of recent investigations. It appears, remarkably, that the dragonfly (and damselfly) penis has a dual function; thus, sperm can either be introduced into a mate or else previously introduced sperm can be cleanly removed. So, it is the female dragonfly's last mate to transfer sperm which fertilises the eggs which are laid, with all its genetic and evolutionary implications. This sounds rather complicated to me; as far as I know sperm displacement does not normally happen amongst humans! I read the section on the predation of dragonflies by birds with interest but I was rather disappointed here. It is emphasised how Hobbies will seize dragonflies in the air, but there is scant mention of other birds. I have watched a female Chaffinch seize the body of a Southern Hawker and fly off with it; also, I once watched a Southern Hawker male chasing a Willow Warbler off its territory. Then, many birds, certainly Blackbirds and Pied Wagtails, will take dragonflies as they emerge from their larval skins in the early morning. I think there is better coverage of insects predated dragonflies; examples from the dragonfly literature include accounts of Hornets seizing Southern Hawkets and of wasps

carrying off damselflies. Furthermore, spiders often trap and eat dragonflies; I have watched a spider consuming an Emperor although, more commonly, the smaller damselflies are the victims. Other dragonfly enemies for consideration are plants, notably sundews.

Dragonfly subjects covered in detail in the work include habitats, egg-laying, life underwater, emergence of the flying insect, feeding, flight mechanisms and reproductive biology. The volume is well written and I expect most naturalists will want a copy for their bookshelf, in spite of the price. As is usual in the *New Naturalist* series of books, there is a striking dust-jacket; in this case, an Emperor dragonfly design by the wildlife artist Robert Gillmor has been chosen. I understand that the value of books of this type in the second-hand market is reduced if the dust-jacket is missing, even if the reading material is unblemished! Anyway, dragonflies are particularly beautiful insects; they are amazingly agile in their hunting skills and, being relatively large, it is easy to watch their behaviour, at least for the flying insect. Moreover, when at rest, the degree of camouflage, even for the big colourful species, is noteworthy. Importantly, dragonflies as larvae live underwater for a large proportion of the insects' lives; for myself I understand very little of this aquatic phase which must vary from species to species. However, the book contains a considerable amount of information on underwater existence; I think this is well worth careful consideration by anyone with dragonfly interests. I certainly recommend a purchase.

PHILIP RADFORD

The Isles of Scilly, by Rosemary Parslow, Harper Collins, New Naturalist Series, 2007, 450 pp., maps, numerous col. pls, line dwgs, £45.00. ISBN-13 978-0-00-220150-6.

Rosemary Parslow has visited the Isles of Scilly almost yearly for nearly 50 years. She has been botanical recorder for the islands for 20 years (Botanical Society of the British Isles) and at present is Director of Conservation for the Wildlife Trust for Bedfordshire, Cambridgeshire, Northamptonshire and Peterborough; previously, she was a scientific assistant at the Natural History Museum, London. Evidently, the author writes with a wide background experience of natural history and conservation issues, linked with considerable photographic skill as judged by her numerous coloured illustrations in the volume. As is pointed out in the preface, any survey of the Scilly Isles must link both marine life with terrestrial

studies of fauna and flora, so the author, with her qualifications and love of the area, was an obvious choice. Moreover, she has carried out a considerable amount of specimen collecting on the islands for the Natural History Museum, using a small milk churn for transporting items back to London; apparently, due to a misunderstanding with the carriers, the churn was once nearly sent to Sicily from London rather than the Scillies! Anyway, a helpful introductory chapter in the work refers to climate, population, travelling to the isles and emphasises the uniqueness of the fauna and flora. Historically, the isles became part of the Duchy of Cornwall in 1337, when Edward, the Black Prince, was made the first Duke of Cornwall, while the area is still owned by the Duchy.

Geologically, much of the rock of the island group is represented by granite, with many modifications and, further, there are many examples of raised beaches; in addition, surprisingly I thought, there is some firm evidence for past glaciation. Arable cultivation can be traced back to the Bronze Age, although it seems uncertain if this persisted through to the Iron Age. Interestingly, there are quite a few limpet middens scattered over the islands, with some linked to the Bronze Age; I have never eaten limpets but someone in a 1978 Bristol University expedition declared them to be delicious in a risotto! Later history is discussed briefly, but with particular reference to the Napoleonic Wars and to World Wars I and II. In addition, there are accounts of the once important Kelp industry, piracy, shipwrecks, farming and the evacuation of the Isle of Samson in 1853. St Mary's is the largest of the island group, with its farmland, harbour, roads and big tourist industry and this is described in some detail. Then, there are the 'Off-Islands', of which four are inhabited; these are Bryher, Tresco, St Martin's and St Agnes. There are several other small uninhabited islands and for which access can be difficult; this is often a frustrating matter for the visiting botanist or ornithologist.

Marine life is obviously of great importance on the islands; shore zonation is fully discussed, together with descriptions of the seaweeds, lichens, fish, corals, sponges and crustacea, while the various jellyfish, molluscs and several other marine biological groupings are certainly not overlooked. Some coastal fish and invertebrates are astonishingly colourful, as demonstrated by underwater photography; one illustration which impressed me is that of a lobster, in blues and reds, with a background of coral. In such a beautiful, balanced environment, it is sad to read of the large amount of litter and pollution which affects so many of the

shores these days. As predicted perhaps, there are few mammals to be observed on the islands and Red Foxes, Badgers, Stoats and Weasels are entirely absent; however, there is the Scillies Shrew to be studied and there are plenty of Grey Seals to be seen on the sea-washed rocks, I expect too plentiful for some of the local fishermen. It is well known that island isolation can lead to island subspecies; one example here is the Scillies form of the Speckled Wood butterfly. The Scillies Shrew has already been mentioned and it has adapted well to island life; one individual which was observed had a decided fondness for Cornish pasties and for Marmite!

Of course, birds are a Scillies speciality and 'twitchers' in droves now arrive at migration times to try and spot unusual vagrants. Historically, the most unusual record is that of a Great Auk found during an archaeological excavation on St Mary's; certainly the Scillies are important for sea birds with breeding colonies of both Storm Petrels and Manx Shearwaters. One expects, perhaps, to find Puffins on the islands and, indeed, the species was once plentiful; however, numbers nesting nowadays, unfortunately, are very low. Similarly, breeding tern colonies have declined greatly recently, with the Common Tern as the only regular breeder. Once, both Roseate and Sandwich Terns bred on Samson; I believe that some ornithologists have hopes of luring them back and one can only wish that they have some success. Even so, you never know what bird is going to land on the islands and notable colourful visitors in recent years have included a Cream-coloured Courser, a Hoopoe and a few Golden Orioles. Obviously, there is so much to attract the naturalist visitor to the Scillies; anyone considering a holiday in the area would be well advised to read this excellent book beforehand. As a local naturalist, C.J. King, wrote in 1924: 'Few districts in the United Kingdom can vie with Scillonia for wild, romantic, unspoiled Nature'. Those using the book, which I expect would have delighted C.J. King, will find both a species and a general index, together with a long list of references; also, as I expected with a *New Naturalist* publication, Robert Gillmor has designed an attractive scene of a Scillies bay for the front cover, complete with terns flying overhead.

PHILIP RADFORD

Wye Valley, by George Peterken, Harper Collins, New Naturalist Series, 2008, 466 pp., numerous col. pls, £45. ISBN 13 978-0-00-716068-6.

This book is concerned with the Wye Valley,

extending to Chepstow where the Wye joins the Severn, and also the adjoining countryside which includes parts of Herefordshire, Gloucestershire and Monmouthshire. Geology, archaeology, general history, landscape and natural history are all covered, and in a reasonably succinct manner. The area includes, of course, the Forest of Dean, with its industrial and mining background and giving rise, these days, to the problems of a balanced conservation programme; the Dean is also well-known because of its spectacular limestone gorges and the ruins of Tintern Abbey, with all its monastic and artistic significance.

With so wide a canvas, the author was clearly given a formidable task; to complete such a work must have involved a long period of preparation and research. George Peterken was evidently the right man for the task and the text demonstrates his enthusiasm for the subject and love of nature. As a background, the author was a woodland ecologist; he is now retired and is president of the Gwent Wildlife Trust at the present time. Conveniently, he lives at St Briavels Common, near Tintern and just above the river, which shows his feeling for the area. No doubt the author had read William Wordsworth's 1798 poem on the remains of the Cistercian Tintern Abbey and was influenced by accounts at that time of local industries; it appears that the sparks from the many forges, seen after dark, were quite a tourist attraction. Wye tours were popular in Wordsworth's day but, inevitably, changes occurred as rail links were developed and, nowadays, there are even two bridges over the river Severn. Everything in the countryside depends on geology and, with underlying Old Red Sandstone, combined with fillings of Carboniferous Limestone and Upper Coal Measures, an attractive and varied landscape is assured. Industrially, coal seams have been mined in the Dean at least since the 13th century, and by free miners too.

One would expect that the author, as a retired forester, would pay particular attention to woodlands and to give opinions as to their management. In fact, over 20 pages are concerned with woods, and are illustrated by helpful colour photographs. Small-leaved Lime, requiring a limestone soil, is of course an indigenous British tree and is well-represented near the Wye; it is a shade species like Large-leaved Lime, which is present as well. Small-leaved Lime is uncommon over much of Britain, so the Wye Valley population is particularly important; often it is in association with Whitebeam and Wild-Service, a very pleasing combination. As I had anticipated,

the text has a full discussion on wood-pasture and coppice, and their significance in ancient woodland management, while charcoal-burning is also well described. One useful section gives the main tree species, with associated ground flora, for differing soil types and varied drainage conditions; this is an important topic where there is a varying geology and, necessarily, different landscapes.

It is well known that flooding of the Wye is commonplace but it appears that a possible tsunami occurred around the Bristol Channel in 1607, as illustrated by a contemporary Monmouthshire woodcut and indicated further by marks in churches; possibly the event was caused by an earthquake under the sea. Historically, the waters of the Wye were utilised to feed fish-ponds and to provide power to grind corn or for hammer driving for engineering works; further, much local trade was carried out using river traffic. The Wye is famed as a Salmon river, but Trout, Elvers and various coarse fish are taken there; unfortunately, catches are now much reduced when compared with even a few years back. Incidentally, I once knew a person who maintained that, by taste, he could distinguish between a Salmon lifted from the Wye and one from the Severn; he liked fine wines also but I do not remember him as a vintage boaster!

The book contains a concise and well-documented account of Wye birds. Pesticides, silt and farm drainage are thought to have affected river bird numbers in recent years and, no doubt, account for the fall in the Dipper population. Happily, Kingfishers still frequent the waters while Grey Wagtails are common, so the picture is not entirely gloomy. As river birds, Cormorants seem to have spread, much to the annoyance of some anglers and, in addition, Goosanders, also fish-eaters, are now present over the upper reaches of the river in small numbers; it is reassuring to read that active Sand Martin colonies are still present along the river. There is a delightful atmosphere, I feel, when Sand Martins are feeding young in their riverbank nest holes on a warm summer afternoon.

I was sorry to read that, in the woods, the Lesser Spotted Woodpecker is now uncommon and the bird continues to decline; I fear that this is a national trend and the reason, to me at least, is a mystery. Importantly, Hawfinches continue to breed in the Forest of Dean, even if numbers are small; this is an enigmatic finch with a massive bill, little known to most people, and breeding sites must surely be preserved. The Oak plantation at Nagshead supports a valuable Pied Flycatcher breeding population,

helped by a well-managed nest-box scheme; interestingly, by ringing, it was shown that one individual lived to the surprising age of nine years. I used to visit these Oak woods and I remember the migrant Wood Warblers which nested there, on the forest floor; I trust they do so still but I have not visited Nagshead for several years now. An oakwood breeding population of Pied Flycatchers, Wood Warblers and Redstarts is really worth listening to, and watching through the season. I understand that Goshawks (of continental origin) now reside in the area, although they are not universally welcome!

Apart from birds, dragonflies are covered; apparently, the Wye is home to the Club-tailed Dragonfly, which is a rather scarce black and yellow Hawker; unpolluted, slow-moving waters are

required and the mature insect flies in June. I have yet to see a Club-tailed Dragonfly, so a June visit to a suitable patch of the Wye could certainly be worthwhile. Fungi are well represented in the Wye woods and associated grassland, and hundreds of different species have been recorded. The whole area attracts mycologists each autumn and regular fungal forays are held by experts.

The volume has a full reference section, together with both a species and a general index. Attractively produced, the book has an appealing front cover design by Robert Gillmor and, in my view, it is a worthy addition to the *New Naturalist* series. It should be welcomed by naturalists and archaeologists alike, as well as the enquiring Wye tourist.

PHILIP RADFORD