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BOOK REVIEWS

Ancient Oaks in the English Landscape

Aljos Farjon
Kew Publishing, Royal Botanic Gardens, Kew, 2017. 348 pages, hardback with many coloured plates as illustrations, tables and maps, some in black & white. ISBN 978-1-84246-640-7.
£30.00

The author, renowned for his work on conifers, is a Dutch botanist who has turned his attention to the iconic tree of his adopted homeland. He does not address the systematics of oak (*Quercus*) species. For those seeking information about the differences between common (English) oak (*Q. robur*) and sessile oak (*Q. petraea*) this is not the book for them. The author makes clear early on that his intention is to treat them as one "oak" and to concentrate on how so many oaks in England have grown to such a large size and occupy such a wide area of the landscape. Eleven chapters deal with the oak life-cycle, the age of ancient oaks and their distribution in England and Europe, reasons for their numbers in England and their most important locations. There are also chapters on their biodiversity and conservation.

The importance of this book lies more than anything on the premise that more ancient oaks are to be found in England than in the rest of Europe put together: 115 living ancient oaks having a girth (circumference) of >9 m are present in the former, and 96 in the rest of Europe. A chapter is devoted to ancient oaks in Europe and the reasons for England's pre-eminence in terms of ancient oak numbers is investigated.

This is a thoroughly well researched book, based on the Ancient Tree Inventory of very old oaks in England. The author has visited all of the most important. He debates methods used to estimate a tree's age and concentrates on those having a girth of >6.00 m as, he argues, trees of that girth are likely to have existed since before 1603, the end of the Elizabethan era. So he has drawn up maps showing the location of these oaks and discusses the historical reasons for this distribution.

He investigates deer parks, both medieval and Tudor, as well as Royal forests and wooded commons. These different types of habitat are steeped in history that is quite fascinating. It is pointed out, for example, that many oaks have survived because they were used, not as sources of timber, but to provide shelter for deer, the hunting of which was a major preoccupation. Some 50% of ancient oaks owe their origin to medieval deer parks, very much a Norman creation, on land granted to many noblemen, with continuous ownership of conservation-minded gentry through to the present day, unlike the situation on the continent. The absence of wars and the availability of overseas timber are also major factors explaining the survival of these species.

For the chapter on the biodiversity of ancient oaks the expertise of several authorities has been called upon to expand upon the many fungi, lichens and invertebrates that may be found on ancient oaks. This chapter also contains some very fine colour photographs. Algae and bryophytes are not dealt with (neither are ferns or seed-bearing plants associated with oak-dominated habitats).

His final chapter, on ancient oak conservation, summarises the main perceived threats to native oaks, which include those posed by forestry, agriculture, landscape alteration, and pests and diseases, with specific examples drawn from many different locations.

The book is richly provided with fine illustrations and coloured distribution maps. It contains detailed references to a plethora of sites in England that contain ancient oaks. For almost this reason alone the book provides good value.

R.K.S. Gray

Leaf Beetles. Naturalists' Handbooks 34

David Hubble
Pelagic Publishing, Exeter, 2017. 150 pages, paperback with line drawings and colour photographs. ISBN 978-1-78427-150-3.
£19.99

This booklet is, in effect, the introductory volume to the AIDGAP key to Seed and Leaf beetles by the same author and published by the Field Studies Council in 2012. Until the latter was published there was no systematic key to the group more modern than that included in Joy's epic tomes of the 1930s.

There are nearly 300 U.K. species in this group, most of which are brightly-coloured beetles in the family Chrysomelidae, such as the green dock beetle (*Gastrophysa viridula*), the "pests" lily beetle (*Lilioceris lilii*) and rosemary beetle (*Chrysolina americana*), both of which can be found in Glasgow gardens. They are a very varied group in colour and shape; some resemble ladybirds, but are distinguished from that group by never having clubbed antennae. The "tortoise beetles" are distinguished by having a flattened rim that they can press down on to a leaf surface as a protection from predators (more like a limpet than a tortoise!); and the "flea beetles" can jump an equivalent distance to that of a flea, size for size, though the jumping mechanism is different.

After a detailed description of the morphology of the various subgroups, Hubble gives a very useful account of the life-history and ecology of leaf beetles as a

whole, followed by a fascinating account of their predators and the anti-predation measures which some beetles have adopted; all of which is as interesting and informative to the general reader as it is useful to the more specialist user.

There then follow species accounts and distribution maps of "selected species" exemplifying the species and genera listed in the relatively short (25 page) identification key. This is an abbreviated version of the key in the AIDGAP Guide in that it generally only goes to genus (except where there is only one species in a genus). The accounts do have photographs of representative species, and though these have been criticised in on-line reviews for being poorly-lit, I think they are nonetheless useful in helping the relative beginner assess whether they are at least approximately correct.

There are many fascinating facts: the "bloody-nosed beetle" (*Timarcha* sp.) exudes haemolymph containing noxious chemicals (cucurbitacins) obtained from its food-plants as a defence, and species which feed on willow manufacture salicylaldehyde which deters ants, though the sawfly *Tenthredo olivacea* is actually attracted to leaf beetle larvae by their defensive secretions.

The section on distribution and abundance is particularly interesting, as it highlights the difficulty of disentangling effects due to, e.g. climate change, from human actions such as accidentally introducing species to a new area, perhaps in association with their food plant – particularly in a horticultural context, or changing patterns of agriculture – the rise and fall of flax crops is cited as an example. And this must be looked at against a background of patchy recording in the past couple of centuries. In this respect the two books by Hubble are "game-changers" in that they bring together and update information that hitherto was rather diffuse, and there is now no excuse for not getting out in the field and studying this fascinating group!

In summary, this can be highly recommended as a very readable and enjoyable book for the general reader who wants to learn about this fascinating group of beetles; and, for the more specialised user, it provides essential information not covered in the AIDGAP key. However, between the two books, there is still a tranche of potentially useful information that remains missing: namely the species accounts and distribution maps that are not included in this handbook, and for which the AIDGAP key gives only sketchy information.

R.B. Weddle

Moths of the Forth and Tay & Loch Lomond National Park

David M. Bryant
Blurb Creative Publishing, London. 108 pages, paperback with line drawings and colour photographs.

My views on field guides may be odd, but I prefer paintings to photographs when it comes to birds. Either will do for butterflies, but for moths I really need photos. So many U.K. moths are of the brown and grey persuasion that I find the differentiating subtleties of pattern and hue can rarely be captured by an artist. This excellent book provides a photographic field guide to the larger moths found across much of the Central Belt of Scotland. No micro-moths are included. For the most part, species are depicted by a single photograph of the adult, with only very occasional ones of other stages of the life cycle. Where there are confusing species, comparative drawings are used to highlight distinguishing features; for example, this is done for the winter moths (*Epirrita* and *Operophtera* species), the conifer carpets (*Thera* species), the marbled carpets (*Chloroclysta* species) and some wainscots (*Mythimna* species). A valiant attempt is made to sort out the pugs (particularly *Eupithecia*) by means of a table of identifying features, but they remain an irritating group. Each species photograph is accompanied by a paragraph of text, which includes a description of appearance, wingspan, flight period, habitat, distribution and an indication of abundance.

The photographs are mostly well-chosen and there are additional ones for species with notable colour variation or sexual dimorphism. If I had to be picky, there are no pictures of females where these are wingless (e.g. the vapourer *(Orgyia antiqua))* and I would ideally like the yellow shell (*Camptogramma bilineata*) to be more... well... yellow. I found one misidentification which is really a typo; I think the figure of eight (page 107) is actually a figure of eighty (*Tethea ocularis*), a species I was lucky enough to have in my garden trap in Glasgow in 2016 and 2017. A decision has obviously had to be made over the inclusion of rare migrants. The death's-head (*Acherontia atropos*), convolvulus (*Agrius convolvuli*) and bedstraw (*Hyles gallii*) hawk-moths are included, but the fabulous oleander hawk-moth (*Daphnis nerii*) found recently near Stirling is excluded, as are the two lime hawk-moths (*Mimas tiliae*) widely pictured in the media. This seems sensible.

The title is unduly restrictive and I hope this does not put people off; I have not had any moths in my area that are not represented in this book, which I have owned for over a year now and road-tested regularly. Indeed, it has swiftly become my go-to book for identification. One of its many virtues is that, being more focused than U.K.-wide guides, it is less likely to lead to a misidentification. This volume is not available in book-shops. Information and costs (variable, but *ca*. £30) can be obtained through the author at

dmbryant@btinternet.com and batches are produced via the Blurb publishing service on demand. Proceeds go to *Butterfly Conservation* to help the Moth Count project. Highly recommended.

A.P. Payne

Mountain Flowers

Michael Scott
Bloomsbury Natural History, London, 2016. 416 pages, hardback with many colour photographs. ISBN 978-1-47292-982-2.
£35.00.

Mountain Flowers is Number 4 in the British Wildlife Collection, following *Mushrooms*, *Meadows* and *Rivers*. This series was considered to be a natural extension of the *British Wildlife Magazine* and was intended to provide a reference source on aspects of British wildlife. With this objective, *Mountain Flowers* is a book for the specialist botanist but also for those who simply enjoy mountain flowers. As Michael Scott points out, in the British Isles there is no need to be a mountaineer to do this, as mountain flowers occur from the coast to the mountain tops.

A quite exceptional personal background qualifies Michael Scott to tackle this subject, since he has spent a lifetime botanising in Britain, the Arctic and many world mountain ranges. Indeed, in 2005 he was awarded an OBE for services to biodiversity and conservation in Scotland. However, he is quick to acknowledge the helpful records from fellow botanists and all those who share "the allure" of mountain flowers.

The introductory chapters provide a very valuable background for the rest of the book, starting with an examination of the question "What are mountain flowers?" This is a trickier question to answer in the British Isles than you might think and leads on to an examination of the origins of our mountain flora and to its survival. Geology, landscape and habitat factors are covered, while altitude is examined in relation to past and present forest and woodland distribution.

In the subsequent chapters, Michael Scott takes us from south to north, each chapter giving a complete inventory of species found in each geographical zone. He begins in Devon and South Wales. He then proceeds from the Welsh mountains, to the Peak District, Yorkshire Dales, Teesdale and Pennines, and the Lake District. The whole of Scotland is covered, from the Borders, uplands and coastline, the Highlands and Islands, all the way to Shetland. Detailed profiles are given for over 150 mountain plants and these are illustrated with over 340 excellent colour photographs. This is backed up by detailed information on location and habitat, discussion of origins, and comparisons with world distribution. He speculates too on "conundrums of distribution" and also on what the future holds for our precious mountain flowers. His extraordinary knowledge and enthusiasm bubble to the surface in these chapters.

To summarise, this is an exceptional source of information and a real encouragement for the reader to go out and explore and share the enjoyment of mountain flowers. It is a superb reference book for professional and less experienced botanists alike. It can be used as a "read" or for reference. Common names of plants are used throughout the general text, but, in the detailed descriptions, full Linnaean binomial names and plant family associations are given too. This, I think, increases accessibility for the specialist and also the reader with just a more general background. I have ordered my own copy! And as for Michael Scott, I think his level of knowledge and enthusiasm for the subject could not be surpassed.

A. Moss