

BOOK REVIEWS

Alexander Wilson: the Scot who founded American Ornithology

Edward H Burt Jr and William E Davis Jr

The Belknap Press of Harvard University Press,
Cambridge, Massachusetts 2013,
444 pages, hardback with numerous illustrations.
ISBN 978-0-674-07255-8, \$35

Of the two Scots who made their names as natural historians in North America in the 19th century, John Muir is now well remembered as founder of the Sierra Club and successful campaigner for the establishment of national parks. Alexander Wilson, by no means a lesser figure, remains relatively unknown, at least in his native Scotland. I hope that the events commemorating the bicentenary of Wilson's death and in particular this new book on his life and achievements will help to remedy this situation.

Unlike Muir, who emigrated to the USA with his family when still a child, Wilson moved to America as an adult of nearly 28. He grew up in Paisley, attended school till he was 10, then became a cattle-herder and at 13 an apprentice weaver. In his spare time, he roamed the countryside observing wildlife, especially birds, shooting game for the table, reading widely and honing his writing skills. Robert Burns was a near contemporary, born only seven years before Wilson, and the publication of Burns's first book of poems in Scots (in 1786, when Wilson was just 20) provided a stimulus to Wilson and other young would-be Scots poets to attempt to publish their own verses. Wilson's Poems appeared in 1790, with an expanded, improved version in 1791. Following Burns's *Tam o' Shanter*, Wilson wrote his own epic *Wally and Meg*. Like Burns, Wilson had staunch egalitarian principles and his writings criticising working conditions got him into trouble with the authorities, who were particularly alert to signs of unrest as the French Revolution became more and more alarming to those in power. After more than one spell in jail, Wilson decided to emigrate. With his nephew William, he walked to Portpatrick (heroically long walks are a feature of Wilson's life), took a ship to Belfast and then on to Philadelphia in 1794.

Burt and Davis concentrate on what happened next. The book provides a relatively short account of Wilson's life (chapters 1 and 2, 62 pages) and an assessment of Wilson's poetry remains to be written. The bulk of the book (chapters 3-5, 292 pages) covers Wilson's pioneering work in ornithology.

In the United States, Wilson worked initially as a schoolteacher. His move in 1802 to a school at Kingsessing near Philadelphia was crucial because there he met the American botanist William Bartram who became his natural history mentor. By now, Wilson was observing and drawing birds in their natural habitats and Bartram provided access to his extensive natural history library, allowing Wilson to read what was so far known of American birds. He began to make longer explorations including a two month round trip trek to Niagara Falls (600 miles as the crow flies), and to publish poems and articles in local magazines. He also began a correspondence with Thomas Jefferson who was not only President but also a keen natural historian. In 1806, he accepted the post of assistant editor of an Encyclopaedia being produced by America's foremost publisher of the time, Bradford and Inskeep. This provided Wilson with the opportunity to realise his developing dream, the writing and publishing of an illustrated American Ornithology, the first of its kind. Production of this work, in nine volumes, occupied the rest of Wilson's too short life.

The first volume was published in September 1808. The work was to be financed by persuading people to subscribe to the whole set: this was a nightmare, requiring Wilson to travel extensively to persuade institutions and well-to-do individuals to subscribe. The travels did allow him to see more countryside and more birds, including a heroic 300 mile walk to Pittsburgh followed by 750 miles by rowing boat down the Ohio river to Louisville in Kentucky. In Louisville, he met Audubon and saw some of his bird drawings - Audubon at that time had no plans to publish. Wilson then proceeded south via Nashville and Natchez to New Orleans and then back to New York by ship. By mid 1813, seven volumes had appeared and much material was ready for volume 8. Wilson had been working, travelling, illustrating at a frantic pace and, when he caught dysentery in August 1813, his exhausted body could not respond and he died, only 47 years old. Volume 8 was complete and in production. Volume 9 was finished and published by his friend George Ord in 1814.

Burt and Davis's chapter 3 provides a detailed account of Wilson's work as a bird artist, observer and publisher, highlighting the technical problems of producing such work at that time and also the pioneering nature of Wilson's approach in depicting birds in natural poses and habitats where possible. The accounts they provide of each set of birds includes Wilson's original sketches, common and scientific names (old and new), a commentary on

Wilson's observations and extracts from Wilson's species descriptions. The assembly of this chapter is a formidable piece of scholarship, as are the Appendices which provide a commentary on the sources Wilson referred to and natural historians Wilson corresponded with.

Chapters 4 and 5 provide an assessment of Wilson's place in the history of ornithology and natural history more generally. He was a pioneer in observing largely from nature and in adopting Linnean taxonomy. American Ornithology was the first major work of science produced entirely in the USA. Baron Cuvier, the pre-eminent European anatomist wrote that Wilson has 'treated of American birds better than those of Europe have yet been treated'.

Chapter 5 also includes a detailed account of Wilson's interaction with Audubon and an assessment of why Audubon is better known to the general public, despite the acknowledgement of serious ornithologists that Wilson was the more important scientific figure.

Overall, this is a fascinating book and of interest to anyone who wishes to know about the history of natural history and natural history illustrations. The pictures are splendid and the price modest for a book of this kind.

Roger Downie

Mushrooms

Peter Marren

British Wildlife Collection 1

British Wildlife Publishing Ltd, 2012, 272 pages, hardback with colour illustrations mostly photographs. ISBN 978-0-9564902-0, £24.95

This is the first volume in a new series of books on British wildlife. Interestingly, British Wildlife Publishing have chosen to start the series with fungi. Possibly due to the fact that although there have been several good field guides to fungi in recent years, there are fewer books on the natural history and biology of fungi aimed at the amateur naturalist. With interest in fungi continually increasing, more people require information on the subject, of a broader nature than just name, habitat, edibility etc. and in an easily accessible format.

If this is the aim of the book, then it is a success. Mushrooms packs in a surprisingly large amount of information on a wide range of aspects of fungal biology for its modest 272 pages. This is done by not going too deeply into any one subject and Peter Marren has been skilful in the quantity of information given being carefully judged to get one interested and to learn enough to be able to move on

to more dedicated tomes on topics the reader may find of particular interest.

Nonetheless, text aside, the first thing that hits one as the book is opened is the high quality of the pictures. Although not a field guide, the photographs of illustrated species, taken in the wild, will serve as additional pictorial references to add to those in field guides. Given the variability of fungi, one cannot have too many reference images of species and the photographs are accurate representations. None of the 'surely that's not, species name, oh it probably is' here. Flicking through the pages, species were easily recognised. For example, the distinctive shape and colour of the Goatcheese Webcap, *Cortinarius camphoratus*, on page 87 was immediately recognised from having seen it in Strathblane spruce woods, before noting the caption and without the aid of smell. On page 109 is an outstanding plate depicting various colourful waxcaps. Photographs of these fungi provide some of the most impressive pictures. The printers should be applauded for retaining the accuracy of the colours in the original photographs throughout the book.

There are 13 chapters covering a wide range of subjects. The chapter Meet the Mushrooms gives an overview of the different fungal strategies for survival and reproduction and in the section Predators and Parasites one learns that the Oyster Mushroom, *Pleurotus ostreatus*, supplements its diet of dead trees with small worms.

There follows an informative and occasionally amusing chapter, What's in a Name, which gives insights into what fungal names mean and how they arose with some entertaining anecdotes. Apparently, puffballs were once thought to appear where a wolf had broken wind. Though one would need to consult a more comprehensive work to learn how evidence for this supposition was obtained.

There is a chapter, Mushrooms on Parade, providing an overview of the major groups of mushrooms, arranged in taxonomic order and another on field guides and identification, including some specialist treatments of genera and a discussion of how taxonomic concepts have changed over time. This is followed by one on habitats, which can be important identification criteria. With so many natural history books centred on the southeast, it was good to note that Scottish species, habitats and mycologists get a fair mention in the book - particularly in the section on mountains. Woods, grasslands, dung and dunes are also discussed.

In Our Midst covers fungi we are likely to see in our urban environments. As well as lawn fairy rings, and a terrifyingly true to life photograph of Honey Fungus rhizomorphs, this includes the small bright yellow tropical toadstool which may appear in household plant pots, *Leucocoprinus birbaumii*.

Under churchyard conifers one can find the scarce *Amanita inopinata* while the attractive terracotta red caps of *Leratiomyces cereus* (prev. *Stropharia aurantiaca*) are frequent on wood chips, as found on a Springburn Park foray.

A further chapter on why some fungi are rare while others are common, discusses the conundrum of truly rare species (some have only been seen once or a few times) versus species which may be under-recorded for various reasons. The frequency of some species can be affected by changes in climate, habitat, pollution and substrate availability. Others may 'sleep' with several years between fruitings.

There are chapters on fungal foraging, poisonous and edible fungi, the pros and cons of picking mushrooms and a final chapter on endangered species and conservation with tables of action plan species.

Before the index there are numerous references to literature, as well as lists of field guides, websites and mycological organisations.

If there is a gripe, it is that where photographs cover the bottoms of both facing pages, there are no page numbers. Apart from that minor point it is good news. This is a welcome addition to the literature available to naturalists and one hopes will be the first of many.

Robin Jones

Urban Trees: A Practical Management Guide

Steve Cox

The Crowood Press, Marlborough, Wiltshire, 2011, 175 pages, hardback, colour photographs, diagrams in colour and black and white. ISBN 978-1-84797-298-9, £19.99

This is a very useful and comprehensive book for any professional or amateur involved with trees in public or garden spaces. Each chapter deals with particular aspects of trees and the urban environment. The text is accompanied by good photographic illustrations and excellent tabled information from the author's own and others' wide research studies.

In an introduction, the author outlines tree physiology and discusses the undisputed advantages to people of having trees around them in the urban environment. An interesting chapter follows, giving a historical setting to people's interaction with trees around their living spaces. Topics covered thereafter include choice of species of tree for different situations. Size choices too are covered with similar recommendations. Subsequent chapters look at tree establishment, especially problematic in public places and continue to discuss fully maintenance of

the mature and maturing tree with all the associated difficulties. All these aspects are comprehensively considered both from the perspective of the tree's problems such as introduced soil, excavations, overhead cables etc., but also the problems and risks trees cause to services, roads and the public generally. Wildlife interactions are discussed too.

Particularly interesting is a chapter on urban tree management and the law (Scotland included). This can be a hot topic for anyone with trees in their garden - or neighbour's garden! Particularly thorny too for anyone involved professionally or otherwise with planning departments. Well worth reading.

As a whole, the book is up to date and conspicuously reflects Steve Cox's many years of experience with trees in the U.K. and abroad. This results in a true understanding of the complexity of giving the urban public the benefits of trees whilst not underestimating the consequent problems. It is as comprehensive a book as I have seen on the subject and should find its way on to the book shelf of planning and road departments as well as landscape contractors and, indeed, the interested public who are at the receiving end of their actions and decisions.

Alison Moss

Guide to Freshwater Invertebrates

Michael Dobson, Simon Pawley, Melanie Fletcher and Anne Powell

Freshwater Biological Association Scientific Publication No. 68, Ambleside, UK. 2012, 216 pages, hardback illustrated with colour and black and white drawings. ISBN 0-900386-80-0, £33

Tom Macan first wrote *A Guide to Freshwater Invertebrate Animals* in 1959. The current guide has been written by staff from the Freshwater Biological Association as a successor to this work and as a tribute to one of the UK's most recognised authorities on freshwater biology, who died in 1984.

Aimed at the established naturalist and those new to the field this book is not intended to be a comprehensive guide but rather a tool to be used as a first stage in the identification of specimens collected in the field in the British Isles. It provides a useful section on how to take your studies further and ways to contribute to the UK biological recording databases.

Everything about this book is clear and concise. A brief introduction to animal classification, its limitations and the constantly changing state of freshwater systems and their inhabitants helps the reader to understand the challenges faced with the age old practice of identification. Glossary,

classification and index sections are easy to follow and well structured.

Like the original publication readers are guided towards an identification in the style of a dichotomous key, but rather than being presented with just two options at each level there can be more, reducing the number of steps to the end point. There are 13 keys, each representing a different group, beginning with a description of the variety of forms, behaviour and developmental stages of the animals to follow. Where appropriate, hand-drawn illustrations are used to help with identification. These are beautifully drawn in great detail and clarity making it a joy to just thumb through the pages even when not being used to make an identification. At the end point, as well as giving, in most circumstances, the family or genus we are also told the number of families/genera and species thus giving you a good idea of how close you may be to an accurate identification.

If there is a negative, then it would be the price. £33 seems a little too expensive. About the £25 mark, I feel, would encourage far more individuals to make a purchase if they are new to freshwater biology or likely to use the guide only occasionally. I think, however, it is a wonderful guide and would certainly recommend it, particularly to those who regularly go out in the field.

Tom Macan would not have been disappointed.

George Paterson