

BOOK REVIEWS

John Scouler (c.1804-1871), Scottish Naturalist - a life with two voyages.

E.Charles Nelson (with a contribution by Maggie Reilly and Richard Sutcliffe, a foreword by Geoff Hancock and a transcription of Scouler's original journal)

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pages, paperback with numerous illustrations.
ISBN 978-0-9565295-1-0, £ 11.50 plus P&P

This nicely illustrated book is a biography and assessment of the life and work of a Victorian scientist who became the first honorary president of the Glasgow Natural History Society. He was born at Kilbarchan in the opening years of the nineteenth century, travelled in North Western America and in the Far East as a young man, was appointed Professor of Minerology and Natural History at the Andersonian Institution (now the University of Strathclyde) from 1829 to 1834, and Professor of Minerology at the Royal Dublin Society from 1834 until 1854. He returned from Ireland to live in Glasgow from 1854 until his death 17 years later. He was elected President of the GNHS in 1851.

John Scouler was an amiable man much liked by his colleagues and friends, and he was an accomplished lecturer. But he published little of substance, and his biographer concludes that his "contribution to his subjects seem to be rather insignificant and his impact on contemporary thought appear to be negligible". Yet between the ages of 20 and 22 he did achieve the most remarkable thing in his life, a trip to investigate the natural history of parts of maritime Canada and what became the U.S. state of Oregon, which puts him in the same bracket as botanical explorer of the Pacific North-West as the great David Douglas and Archibald Menzies.

It arose because as a Glasgow student he caught the eye of Professor William Hooker, at that time Professor of Botany, who recommended him as surgeon and naturalist aboard a ship bound for the Columbia River, though he had not yet medically graduated: he found that his co-traveller was David Douglas (also employed by Hooker), and it is a testimony to his amiability that he got on well with his famously prickly companion. They sailed together to Africa, to the Juan Fernandez archipelago of Robinson Crusoe fame, and to the Galapagos, collecting on the way, but split up on landing in North America to maximise their

explorations. Scouler collected many dozens of new flowering plants (some 20 species were named after him by Hooker and others), as well as cryptograms, fishes, birds, reptiles, insects, fossils, and mineralogical and ethnographic specimens. He described the great spawning run of the hunchback salmon, also initially named after him. He kept a journal, which is reprinted here: it is brief, but vivid and full of sang froid, describing how they entered an Indian house "but the reception we experienced rendered it prudent to leave it as soon as possible. Two of the Indians drew their daggers, an insult of which we were obliged to take no notice". The suspicion of the natives is understandable. On another occasion he robbed a cemetery to steal the skulls of two Chinook children with artificially flattened skulls to add to his collection, "an act of desecration that would certainly have led to his execution had he remained or returned". He left them in his will, along with 16 other crania and other ethnographic artefacts, to the Museum of Natural History in Paris, where they are still extant. No doubt the First Peoples would welcome them back now.

The rest of Scouler's life was an anticlimax from the scientific point of view. Little is known of his second voyage to the Far East, of which he kept no surviving record, and as occupant of chairs in Scotland and Ireland he made few contributions to knowledge. But he remained an enthusiast and a collector, described after his retirement living in Sauchiehall Street surrounded by books and specimens-- "the central table was covered by manuscripts, and in the middle of it was a huge mountain of cut tobacco, from which the Doctor would from time to time replenish his pipe". Verily a man of his age - but not of ours.

Chris Smout

This book has an interesting history. Blodwen Lloyd Binns (BLB) was on the academic staff of the Royal Technical College (now the University of Strathclyde). In the 1950's, she was asked to deal with the contents of some old cupboards; these turned out to contain a forgotten collection of plant specimens originally held by the Andersonian Museum (Anderson's University was the forerunner of the Royal Technical College), many of them collected or purchased by John Scouler. BLB catalogued the specimens and became increasingly fascinated by Scouler. She sketched a biography of him, printed as the first part of the book, with extensive clarifying notes by Charles Nelson. BLB died in 1991 and left a substantial bequest to Glasgow Natural History Society along with a list of

requests, one of which was that the Society should try to complete her biography of Scouler. The Society approached the notable historian of Natural History, Dr Charles Nelson, who happened already to have an interest in Scouler and he agreed to take on the task. Part of the work involved obtaining a scanned copy of Scouler's manuscript journal of his 1824-26 voyage to the Americas from the Oregon Historical Society and then deciphering Scouler's difficult handwriting to produce a readable version: this appears in the book as Appendix 1.

The main text, eleven chapters, covers Scouler's early life, his two voyages; to the Americas on the William and Ann, 1824-26 and to India, 1826-29; his time as a professor in Glasgow and then in Dublin, his personal and later life in Glasgow, and finally, an evaluation of his achievements. Each chapter is attractively illustrated and ends with extensive notes; Charles Nelson has done an immense job in tracking down sources and in clarifying/updating key points in the narrative. As he notes in the acknowledgements, many people have helped supply information, but the task of writing a book of this kind has been somewhat simplified by the availability of on-line documents. The book also contains a bibliography of Scouler's publications, a list of the plants and animals named after him, an account of the fate of the zoological and ethnographical specimens held in the Andersonian Museum (many of them collected or purchased by Scouler), and finishes with indices of subjects and species. The covers and a set of internal colour plates beautifully illustrate animals and plants associated with Scouler, as well as the man himself.

Scouler's parents lived in Kilbarchan, Renfrewshire. As was common for bright boys in those days, Scouler attended the University of Glasgow from an early age, probably 13, intending a career in medicine. He attracted the attention of William Hooker (professor of Botany from 1820) and at the age of 20, Scouler, very recently licensed to practise medicine (after minimal training, some of it in Paris), was appointed surgeon/naturalist on the Hudson Bay Company's vessel William and Ann, on a voyage to the Pacific coast of northwestern America. It turned out that the Horticultural Society of London had arranged for David Douglas, who knew Scouler from Glasgow, to travel as passenger on the same vessel, briefed to collect seeds for new plants worthy of introduction to UK gardens. Douglas was 5 years senior to Scouler and already a veteran plant collector, having previously visited the east of North America. The voyage included a stop in the Galapagos, about a decade before Darwin, but the main collecting Scouler did was around the Columbia River, now forming the border between Oregon and Washington state.

After his return, Scouler made one further voyage, to India, but this is poorly documented. He was appointed Professor of Mineralogy and Natural History in the Andersonian University in 1829 (aged 25, with little obvious qualification in mineralogy!); one of his main roles was to curate the Andersonian Museum which moved to impressive new premises in 1831. Scouler moved to be Professor of Mineralogy and Geology for the Royal Dublin Society in 1834, probably because of the poor salary provided in Glasgow. This move did not, however, work well; Scouler was much liked in Glasgow, but little appreciated in Dublin. He returned to live in Glasgow in 1854, in poor health and, while retaining his Dublin post, and salary, never taught in Ireland again. In Glasgow, he acted as honorary curator of the Andersonian Museum and was made honorary president of the newly founded Natural History Society of Glasgow from 1851.

So, there is a mystery about Scouler. Why did such a promising young man achieve so little in scientific terms? Although many species, mainly of plants, bear his name, they were formally described by others. His bibliography looks extensive until you note that most of it comprises abstracts and lecture titles, with very few full papers and no books. He lived into the period of ferment around Darwin and Wallace's evolutionary theories, and was a Fellow of the Linnean Society where these theories were first presented, but he rejected the idea that species could change. He was apparently an excellent lecturer, but never left written accounts of his lectures.

Charles Nelson has produced a meticulously researched and very readable account of Scouler and his career; I recommend it heartily to anyone interested in the history of Natural History. Scouler was not the neglected hero of science that Blodwen had envisaged, but she would, I think, have been delighted by this book.

Roger Downie

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.

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 Kingessing 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

Amphibian survey and monitoring handbook

John W. Wilkinson

Pelagic Publishing, Exeter, 2015, 120 pages, paperback, colour photographs, diagrams in black and white.

ISBN 978-1-78427-003-2, £29.99

After a brief introduction to amphibians, this handbook comprises three main chapters, covering before, during and after survey work, followed by a resources chapter. The book is short (the three main chapters are less than 90 pages), but packed full of information. It is written in a chatty, often jocular style (much use of interjections with exclamation marks), and is easy to read. However, I wonder who it is aimed at. The general style seems aimed at people who have never surveyed amphibians, nor who have ever written a scientific report before, but the content ranges from extremely basic advice to much more complex matters such as radio-tracking. Another issue is geographical scope. Wilkinson admits that his main experience is in the UK and the book's main emphasis is on the kinds of surveying that could be done in Britain; for example, he gives considerable attention to Habitat Suitability Index (HSI) assessment for great crested newts (I am not aware of HSI's for other species). However, he does try to internationalise by referring to amphibians found elsewhere and by mentioning resources needed to work in other countries, but the level of detail provided is too little and too selective to be of much use. My guess is that a young UK amphibian researcher planning survey work abroad might find the book a helpful introduction, but not much more, and that a researcher in, say Brazil, would find it of very limited use.

I found myself listing unexpected omissions and points I would take issue with: here are some. For 20 years, the main sourcebook for amphibian survey work has been Heyer et al. (1994); this is listed under 'other useful textbooks' in chapter 5, but ought surely to be in the early preparations chapter; more surprisingly, Dodd's recent book (2010: Amphibian ecology and conservation), which provides an authoritative update on methodology, is not even cited. IUCN is not in the index and the IUCN Red List for amphibians is not mentioned in the text (though some photographs of amphibians have their IUCN status mentioned). In addition, the two main websites on amphibian diversity, taxonomy and conservation (Amphibian Species of the World; Amphibia Web) are not mentioned. This is very surprising, and is not because of lack of space: they

could fill the dead space in Box 1.1 on page 8. The section on great crested newt surveying does not mention the requirement to demonstrate training when applying for a licence. The discussion of risk assessments says that many organisations will have a lone worker policy; I feel this is unsatisfactory for a book aimed at beginners, and including working outside the UK, especially when considering lone female workers; my institution would simply not allow this. Chapter 4 includes a substantial section on report writing; this is not specific to amphibian surveying at all, and many books and courses cover how to do this, so I wonder on its inclusion here; the section surprisingly omits any advice to have the draft report read over by a knowledgeable person before submitting it. Chapter 4 also briefly goes into mark-recapture methods, including toe-clipping, but only superficially mentions the ethical issues: should we really be encouraging newcomers to the field to use this controversial method?

Overall, the author's enthusiasm and encouragement is refreshing, and I learned some useful pieces of information, but I feel there is considerable room for improvement, especially in a short book priced at £29.99.

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 ceres* (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