

Book reviews

Scottish Fossils, by *Nigel Trewin*. Dunedin Academic Press, Edinburgh. 2013. £30, hardback, 144pp. ISBN: 978-1780460192.

Nigel Trewin is certainly a familiar face to Scottish palaeontology and geology being the author of this book's slightly older geological sibling *Geology of Scotland* (2003, The Geological Society) and *Fossils Alive!: New walks in an old field* (2008, Dunedin Academic Press) as well as an impressive suite of publications, in particular on the Devonian fish of Caithness and the Rhynie Chert. It is with this experience that Trewin has brought a measured balance of academic rigour and informal personality to this charming and well-illustrated book. It would serve just as well as a coffee table book as it would for a quick reference for Scottish fossils outside ones' area of expertise. Each entry about a particular fossil gives a brief (maximum one page without figures) description of the history of the taxon, the discovery of the specimen, important and related publications and even the geopolitics surrounding some of the specimens (cf. *Leptopleuron* p. 98-99). The result is that one does not have to trawl through mountains of complex terminology to gain a sufficient understanding of each fossil group; it is all presented in an accessible manner.

The layout of the book is good. Trewin informs the reader at the outset what key scientific metadata is associated with each entry viz. phylum, class, order, family, genus and species, locality age and stratigraphy; all the information a geologist or palaeontologist would expect. He also presents a comprehensive summary of Scottish institutions that hold significant fossil collections. As such, this book would be a worthy travelling companion for anyone who indulges in holidays or weekend trips with the ulterior motive of exploring the geological and palaeontological natural history of Scotland. With the interested amateur or novice in mind, as well as a reminder to professionals, it is also reassuring to see that a considerable amount of page space is given up to the practice of responsible fossil collecting and making the reader aware of the Scottish Fossil Code.

Following a customary colourful geological timescale chart customised to show where and when the included Scottish fossils occur, the book proceeds with the fossils themselves. Rather than being organised in chronological order the author has chosen to arrange the organisms by complexity. We first encounter bacteria, as represented by Devonian and Carboniferous stromatolites and oncolites, followed by plants, the whole gamut of invertebrate groups and then vertebrates (from fish to mammals). Finally, Trewin includes a pleasing chapter on a variety of interesting and important Scottish trace fossils giving them the limelight they need.

Within each fossil chapter, the organisms are arranged in stratigraphic order, which, to a certain extent, aids to

demonstrate how the groups have evolved and highlights the diversity of fossils that may be found in Scotland. Each fossil group is introduced by way of a brief description of the morphology, some examples and where they come from and their significance in their fossil group. Technical terminology is explained in an informal yet accurate and educational style with the occasional personal anecdote or opinion which serves to make this book even more readable: 'Creationists please note, the "missing links" on which you pin false hope are increasingly to be found in museum drawers!' (p.74).

Besides the succinct and informative content, the images are notable. They are well-chosen and represent some of the best specimens representing each taxon but unfortunately are not always the best images of the best specimens. Some are slightly out of focus, for example, the image of the fine *Palaeospondylus* specimen, while others (e.g. *Akmoniston*) could have been credited with a greater visual presence. This does not detract from the book as a whole. One particularly nice touch are the corner icons on each page alerting the reader who may be flicking through the book to which group of fossils is on that page, arthropods being represented by a knobby head and thorax of the trilobite *Encrinurus* whilst the reptiles are designated by the beady eye of *Elginia*.

But which organisms have been included and is your favourite species of Jurassic cephalopod likely to have been included? Probably not. As Trewin admits in a book like this which is primarily intended for the general public, it is impossible to represent all the groups of fossil organisms from Scotland in any great depth. His choice of taxa has been, to some extent, a personal one but also one driven by the desire to describe the history of Scottish palaeontological science rather than just show off the fabulous specimens originating from Scotland. However, I couldn't help but feel that the sponges had been hard done by with only one entry of the Cretaceous taxon *Ventriculites* found in Pliocene gravel. The Silurian deposits of the Pentland Hills yield some beautiful sponges that would have provided a nice contrast and comparison to *Ventriculites*. But it is not so much *Ventriculites* that is of interest in this entry, rather the deposit it comes from; a Cretaceous chalky chert pebble from a Pliocene gravel deposit quarried for Neolithic tools on top of a hill where there are no other Cretaceous chalk deposits in the vicinity! The inclusion of such quirky specimens is truly one of the delights of this book and demonstrates Trewin's profound knowledge and familiarity with Scottish fossils of all ages and groups.

Scottish Fossils is more than a fanciful collection of Scottish palaeontological oddities. It describes the interactions amongst those working in this field, both amateur and professional, from the eighteenth century right up to the present day. It is 'a celebration of the fossils of Scotland' (p.1)

but it should also be regarded as a celebration of those who work on and with the fossils of Scotland. The references of scientific publications and naming of specific collectors and academics are testimony to this. The reader gets a feeling that there is a strong community of devotees to Scottish palaeontology and that the material and work of these devotees is of global interest and scientific importance. *Scottish Fossils* raises a glass to all those working on Scottish fossils.

Tom Challands

University of Edinburgh, UK

DOI 10.1144/sjg2014-020

Rock Trails: Scottish Highlands by *Paul Gannon*. Pesda Press, Caernarfon. 2012. £14.95, paperback, 252pp. ISBN: 978-1-906095-38-3.

I first came across Paul Gannon's writing on geology and landscape in his short articles for *The Professional Mountaineer* magazine. These glimpses spurred me to find the fourth book in his Rock Trails series, which deals with the Scottish Highlands. The other three cover Snowdonia, the Lake District and the Peak District. The subtitle of the Rock Trails books '*A Hillwalker's Guide to the Geology & Scenery*' gives a fair indication of their target audience. The volume covers the area to the north of the Highland Boundary Fault but excludes the Hebrides, Orkney and Shetland, although the map on the back cover might lead you to think it covers Skye.

The intended readership is hillwalkers and mountaineers with no prior geological knowledge who wish to gain some understanding of the events and processes that fashioned the Scottish Highlands. It is not intended as an academic work, or even a field guide in the more traditional sense, but to enhance the experience of hillwalking in the Highlands.

The book is divided into two main sections. The first nine chapters cover the major geological events that have shaped the landscape and scenery of the Highlands, from the Lewisian Basement to the glaciations of the last few million years. Active screes and landslips are also mentioned where they are relevant to particular photographs or mountains, for instance in the combined photograph and diagram of The Three Sisters of Glen Coe (p. 85). The second part of the book contains detailed descriptions of 18 walks. The endpapers show the locations of the walks on attractive geographical and geological maps, although these are small-scale maps that, in my opinion, would be of limited use in route planning for linking up the walks. The section on the walks is preceded by sound advice on the ruggedness and remoteness of the mountains of the Highlands. Each individual walk is graded to show how challenging the terrain and navigational challenges of the route are and how long the walk should take. Some challenging mountain walks, including Ben Nevis and Bidean nam are balanced with lower-level and less strenuous alternatives in Glen Roy and Glen Nevis.

The text certainly achieves Gannon's aim of being accessible and minimizing the use of technical terminology,

which is balanced by a short, but reasonably comprehensive glossary. I personally dislike use of phrases such as 'in what geologists call a "nuée ardente"' (p. 85). If the terminology is being applied correctly then it is there to improve communication, not to mark out who is a geologist. Some of the definitions used in the book are not strictly correct, such as the distinction between synform and syncline given on p. 66. However, such issues are compensated for by such lyrical flourishes as the description of Stac Pollaidh as 'rather like the rotted stump of a tooth' (p. 33). The selected bibliography at the back of the book and the encouragement in the text to download free guides and booklets from BGS and SNH also cater to those readers who do wish to pursue subjects raised in the book in greater depth.

Plentiful illustrations are mostly of high-quality and well chosen. Some are pure landscape or 'action' shots. Some of the interpretative diagrams are of a very high standard, such as the relict landscape of the Lewisian seen across Loch Maree; others suffer from poor contrast of text on background colour blocks. Many photographs lack scale bars within the photograph, although the scale may be indicated in the caption. The large-scale maps that act as a header for each walk have little detail but this may be to discourage inexperienced readers from using these as their only maps for route-finding. The book itself is a compact paperback that would easily fit in a rucksack and individual walks span 4-5 pages.

Gannon's emphasis on the lack of need to hammer or collect samples to appreciate the various features illustrated in the book from exposure- to landscape scale, along with his advocacy of using binoculars to inspect features, is welcome. This emphasis on 'leaving no trace' is in tune with the messages that the hillwalker often gets from other quarters and encourages geoconservation alongside the conservation of biodiversity. The focus on the general understanding of the landscape, rather than a series of detailed locality descriptions that are the staple of excursion guides, enhances the value of the book; it allows a general understanding of the geology of groups of hills, rather than describing very specific features. Gannon's encouragement of walkers to use well-trodden paths, such as the path to the Bone Caves on the way to Breabag before heading for the higher ground does indicate a commitment to encouraging the reader, especially the non-geologist, to undertake parts of the walks for the sake of the geology alone. The best evidence for this is the encouragement to ascend Ben Nevis via the Tourist Path, which is oft derided as a route by experienced hillgoers, precisely because it allows the walker good views of the geology.

Overall, I think the book will appeal to the target audience of hillwalkers and those involved in outdoor education. Those of a more academic persuasion will not find anything factually new in the work but could do worse than to consult the volume to find ways to engage the interest of non-geologists in the topics of geology and landscape, geoconservation and geodiversity.

Alastair McGowan

University of Glasgow, UK

DOI 10.1144/sjg2014-023