

inferred from them. Roux retorts with a criticism of Hertwig's control experiments on the same objects (frog's ova), and it is difficult to decide between two observers who mutually accuse each other of inaccuracy and want of attention to detail.

So far as one can judge the advantage in the polemic lies with Roux, the more so because he invites our confidence by asking any one who is interested to come and inspect his preparations of hemiembrs, and to judge for himself whether or not he has described them truly, and whether they do not support the theoretical conclusions drawn from them.

BRITISH VERTEBRATES.

A Sketch of the Natural History (Vertebrates) of the British Isles. By F. G. Aflalo. 12mo, pp. xiv + 498. Illustrated. (Edinburgh and London: Blackwood and Sons, 1898.)

WITH the host of books in existence on British animals, it is a somewhat curious fact that, so far as we are aware, there is none which treats of all the vertebrates collectively, with the exception of Jenyns's "Manual," published in 1835. Still more curiously, that particular work happens to be omitted from the very useful bibliography Mr. Aflalo gives at the end of his little volume! Under these circumstances, the work before us fills a distinct gap; and as it is beautifully illustrated and brightly written; it ought to command a ready sale among those desirous of knowing something about the higher animals of our islands without being bored by technicalities.

Needless to say, it is not a book for the professed naturalist, and should not therefore be criticised from his standpoint. It has no pretence to be an advanced educational text-book; but is intended to appeal to those who have the "field-fever" strongly developed, and who are certainly in need of a cheap and portable volume dealing with all the vertebrates to be met with by field and flood in the British Isles. To be as accurate as possible without being dry, to produce a chatty little handbook, and not a dissecting-room manual, seems to have been the main object of the author; and in this laudable endeavour, in our opinion, he may fairly claim to have succeeded.

One very notable feature in the book is that scientific names are relegated to a series of tables, prefixed to the groups to which they refer, and that in the text the animals appear under the popular designations alone. This certainly renders the volume much more readable than would otherwise be the case. Special attention is given to the life-history of each animal treated; but descriptive details sufficient to distinguish the species from its British relatives are added, and in those cases where we have perused them, appear all that can be reasonably required.

Any nomenclatural list is now-a-days open to criticism, were we disposed to be critical on this subject. But in the main the author appears to have steered a fairly middle course between extreme innovations and old-fashioned views. In one case he is clearly wrong—namely, in calling the marten *Martes sylvatica*, and restricting *Mustela* to the polecats and weasels. In

birds, we are glad to see he employs genera mostly in a wide sense, so that the blackbird and ouzels appear in the same genus as the song-thrush. But these are details in which his readers have probably little or no interest, and which his critic may therefore leave alone.

If we might suggest an improvement, it would have been to curtail the amount of space devoted to the sperm-whale, which scarcely comes under the designation of a British animal, and to give more details with regard to some of the smaller mammals. For instance, a little more might have been added as to the colour-changes of the squirrel, and the distinctive coloration of the tail of the British form; while further information as to the black variety of the water-vole being restricted to damp localities might have been desirable. Perhaps, however, the author is better acquainted with the tastes of his readers than is his critic; and personally we confess to much more interest in reading the anecdotes relating to ambergis than we should in wading through details of coloration of fur and feathers—important as these latter undoubtedly are in their proper place.

As regards paper, type, illustrations (from the facile pencil of Mr. Lodge), and freedom from misprints, the volume appears all that can be desired. As an Easter gift to friends, whether young or old, interested in the natural history of our own islands—which is the proper commencement of zoological studies—no volume could be more appropriate.

R. L.

OUR BOOK SHELF.

Canada's Metals. By Prof. Roberts-Austen, C.B., D.C.L., F.R.S. Pp. 46. (London: Macmillan and Co., Ltd., 1898.)

THE address which Prof. Roberts-Austen delivered at the Toronto meeting of the British Association last year, and afterwards repeated at the Imperial Institute, was so well received on each occasion that there must be many who will welcome its appearance in book form. The main object of the address was to indicate the nature and distribution of Canada's mineral wealth; but, to lend additional interest to the subject, and afford a base for experimental illustration, a specific metal—nickel—which is especially Canada's own, was given the most prominent place in the discourse.

How great is the mineral wealth of the Dominion is understood by all who know the work and publications of the officers of the Canadian Geological Survey. Report upon report have been published on the mineral resources of the various provinces, but they have mostly gone unrecognized in England, and British efforts have been tardy in developing the riches in Canadian territory. Ten years ago Dr. Dawson published his exhaustive and glowing report on the mineral wealth of British Columbia, in which he pointed out the richness of the region in auriferous deposits, and stated that alluvial gold would probably be found in the bed of every tributary of the Yukon. Had British capitalists known how to value reports of this character, they would long ago have developed the Yukon basin instead of waiting until the success of placer mining at Forty Mile Creek in 1896 called public attention to the extraordinary richness of the district in precious metals. The facts brought together by Prof. Roberts-Austen will, however, help to make the extent and variety of Canada's mineral deposits better known than they have been, and will also show that, large as is the output at the present time, it will certainly be enormously exceeded in the future.