V.—LESSONS IN ELEMENTARY ANATOMY. *By* ST GEORGE MIVART, F.R.S.
Macmillan & Co. 1873.

THE Lecturer on Comparative Anatomy at St Mary's Hospital is already well-known as a critic of Mr Darwin's views, whose opinion is entitled to consideration. Mr Huxley has answered, but has not wholly disposed of the criticisms, and the more attention is paid to the subject the more it will be seen that Mr Mivart has grouped together in a formidable way the difficulties, felt by naturalists or created by Mr Darwin himself. Mr Mivart has a claim to be listened to on the Evolution question, a claim which, it is to be regretted, more writers on the question do not possess; he has carefully worked at the Anatomy of the vertebrates, and the Royal and other Societies have published several important memoirs of descriptive or theoretical anatomy. The present volume is therefore no compilation at second hand, but represents the knowledge gained, scalpel in hand, by its author. The plan of the book is admirable. The broad general statement of the plan of the human body is followed by a comparison with the plan of the body in the inferior animals, the leading facts of morphology being thus stated in a series of simple propositions. It is to be regretted that the small size of the figures, and their frequently defective printing, render the illustrations of less value than they might otherwise be; but the clearness of the diagrams compensates for this to some extent, and will, in the hands of a competent teacher, more especially if he possesses, as he ought, a little skill in drawing on the black board, render the lessons easy in spite of the necessarily complicated facts enumerated. What may be done in the way of instruction and examination is well illustrated by what took place a few years ago in Camden Town. The teacher of a school in that district had, as a speciality, the teaching of physiology, and so strong was his friends' belief in his powers, that Mr Huxley was invited to examine the school. Our informant, himself a teacher of experience, and who had already earned a high reputation in the teaching of physiology, was at a loss which to admire most, the careful instruction which enabled the pupils to apply to the horse the knowledge they had acquired concerning the human body, or the skill of the artist, whose extemporized chalk drawings were so skilful that the pupils were never in doubt as to the points to which they had to speak. Of the eleven following lessons, the back-bone, breast-bone, and ribs, the skeleton of the head, that of the upper and lower limbs, are discussed in as many chapters (ii. and v.). The sixth lesson sums up the

generalization of the comparative anatomist as to the homologies of the skeleton. The skin, the muscles, the marrow and sense organs, the circulating system, the alimentary system, the excretory organs, are the titles of the succeeding lessons. It is a misfortune that Mr Mivart's book, like Mr Huxley's physiology, has sacrificed to Mrs Grundy in a direction which the sound judgment of Mr Huxley, as the author of the earlier treatise, did not lead us to expect. The exclusion of the reproductive system from books intended for students is a grand mistake, seeing that that system bulks so largely in the broad views of classification now current. If it is the desire of men who know the evils of popular ignorance to counteract the endless mischief resulting from neglect of physiology as applied to health, it is a half-hearted enterprise to teach the people without discussing that system, which, in our civilization, affects so largely the health of the community. Lord Campbell's Act is a necessity because our teachers have been mealy-mouthed, and an artificial immorality has been created, which has done more mischief, because it has acted more secretly than what is commonly recognized as honest, straightforward vice. In the case before us, if this book is intended for students, it is incomplete to a grievous extent, the reproductive organs being very important elements in a comparative view of the vertebrates; if it is meant for a school-book, it is overloaded with technicality; the compromise is, therefore, an unfortunate one.

The views Mr Mivart adopts are in the main those of Professor Owen, but they are set forth with a directness and simplicity of language which will materially help readers of Owen's books. The examples are, it is true, not in all cases drawn from familiar objects, the writer's own labours having of course impressed unduly the peculiarities of more of the rarer animals. Indeed, there is a mixture of the elementary treatise with the technical essay on evolution, which enhance its value for students, though ordinary teachers may sometimes be perplexed. In the first chapter the vertebrates are again spoken of as agreeing in possessing a backbone—a proposition, doubtless true, but one which might, we think, be better put otherwise. For, as it stands, it directly suggests that antithesis between vertebrates and invertebrates which, apart from its logical error, a negative definition being inadmissible, leads to the still graver misconception that the vertebrates are an assemblage to which all other groups form one equivalent assemblage. This error Mr Mivart practically guards his readers against by giving the vertebrates—molluscs, articulates, and the like—as primary

divisions or sub-kingdoms ; but, he says, page 8, "the last six sub-kingdoms may very conveniently be taken together and spoken of as the invertebrata, in contrast to the highest sub-kingdom from which in so many points the other primary group agree in differing." The essential of the vertebrate is not the vertebræ, but the partition separating the neural canal from that in which the elementary and principal circulatory organs are placed, in which partition vertebræ may or may not be developed. It may be said that the statements are identical for all practical purposes ; true, but it is the duty of a definition to give only the essential, and with the *amphioxus* before us, vertebræ are not essential. Again, Mr Mivart speaks of those animals which have the nervous system ventral, namely, the annulosa, as if the relative position of ventral and dorsal were fixed, and similar for all groups. It might have been better to keep both student and teacher in mind of the differences presented by the various groups, and the difficulty of using a single term in all cases. The nervous system is placed on the surface of progression in towards the annulosa, away from it in the vertebrates ; but it is important to note that the embryonic relations of the vertebrate limbs, as of the annulosa animals, are to the skeletal structures adjacent to the nervous system. We may perhaps be charged with hypercriticism in these remarks, but we would defend ourselves by reminding Mr Mivart that the blunders of the so-called popular text-books derive a certain amount of support from the absence of correction of them by those who put forth scientific treatises entitled to authority. We would earnestly recommend science teachers to possess themselves of these Lessons in Elementary Anatomy, for no better instruction could be given than is contained in them, and no better plan could be devised for making easy the acquisition of exact anatomical knowledge.

VI.—THE DISEASES OF THE STOMACH. Being the Third Edition of the "Diagnosis and Treatment of the Varieties of Dyspepsia." Revised and Enlarged. By Wilson Fox, M.D., F.R.C.P., F.R.S., &c., &c. London: Macmillan & Co. 1872.

THIS new edition of a well-known work is one which may be resorted to with confidence for accurate information bearing on the diagnosis, pathology, and treatment of a numerous and often obscure class of cases. The present volume is rendered more complete, and consequently much more valuable for