

REVIEW.

PRINCIPLES OF PHYSIOLOGY, GENERAL AND COMPARATIVE.—BY WILLIAM B. CARPENTER, M. D., F.R.S. F.G.S., *Examiner in Physiology and Comparative Anatomy in the University of London: Professor of Medical Jurisprudence in University College, &c., &c.* Third edition, London, John Churchill, Princes Street, Soho, 1851. 1080 pages.

The elaborate work before us is intended to present a compendium of the principles of Physiological science up to the present time, it is a compilation of the facts, data, and deductions on which that science is founded, carefully arranged and systematised, so as to bring into view, and make serviceable for reflection, the vastly extended series of the animated races which clothe, or inhabit our globe. Doubtless, the great end and aim in this investigation is the study and comprehension of the several functions which the varied structures of the human body present; these are often difficult to comprehend, from the simple observation of their individual processes; nay, there are many parts, such as the thymus and thyroid glands, on which the fullest light of science has failed to indicate their uses. This obscurity has, however, of late years, been considerably illuminated by the study of comparative Anatomy: here we may often trace from the general to the special form, while we constantly find in the lower grades of animated existence the rudiment or type of that plan which becomes more elaborate and complicated as we ascend the scale; the investigation of comparative anatomy in these instances has been beautifully compared by the illustrious Cuvier to so many various experiments and demonstrations already prepared for us by the hand of nature, in which, from the veriest rudiments, we are led step by step to the comprehension of the more perfect organs; evincing also in the less complex organization, a simplicity of function that by degrees enables us to understand the complicated Physiological data. The study of individual development,—Embryology,—has also greatly assisted in the elucidation of Physiological facts, presenting us with data that very surprisingly confirm the truths of comparative Anatomy, as illustrative of the more complicated organisms proceeding from the more simple types. Again; the most powerful assistant in the wonderful progress that Ana-