

REVIEWS.

ANTI-DARWINIANISM.*

IT very seldom happens in any controversy, that, when a partisan of either side comes to speak, he states something which is satisfactory to both parties. We should not have expected such a result in the case of the debate—not yet extinguished—between the supporters of Mr. Darwin's doctrines and those who oppose them. Yet such has actually occurred. M. Flourens, one of the oldest and most renowned of French physiologists, has written a work which he calls an "Examination" of that treatise, which is now classic,—“The Origin of Species;” and in it we observe a production which will be hailed with pleasure by both “Creationists” and “Selectionists.” Such, however, is far from what the author intended. The book is written in the most bitter spirit, and is totally devoid of that dispassionate consideration of evidence which should ever be the aim of the philosopher. M. Flourens has damaged his own case very seriously, and while his party may rejoice that a volume of abuse has been hurled against Darwinian speculations, the opposite side may congratulate itself that so little has been done to impugn its views, and so much has been effected to deteriorate its opponents' case.

Of the hundred and seventy pages which M. Flourens' book contains, but seventy are devoted to a critique of Mr. Darwin's essay, the remainder being absorbed by a loose collection of irrelevant matters; thus we find the following among the headings of the succeeding chapters:—Decaisne's Experiments on the Variability of Species; Swammerdam, Réaumur, and others on the Generation of Insects; Van Beneden on Parasitic Worms; and Pasteur on Spontaneous Generation. The author harps on the old string, the non-fecundity of genera, and omits to notice the grander portion of the Darwinian theory. He speaks of species as things defined, and yet the only definition he gives is that which relates to fecundity. Forgetting that species is a purely abstract term, he confounds it with animal form, and thus he shows at the very outset an utter inability to appreciate even the fundamental principle of the doctrine of “natural selection.” M. Flourens' argument is this: a new species cannot originate by natural selection, because certain animals are not fertile when brought together. If new species were merely variations of one which had pre-existed, then they should be fertile among each other. We reply, we know not what a *species* is, unless

* Examen du Livre de M. Darwin sur “l'Origine des Espèces.” Par P. FLOURENS, Professeur au Muséum d'Histoire Naturelle, &c. &c. Paris: Garnier frères. 1864.

it be one of those terms which have in every age trammelled the progress of philosophy ; therefore we request that a species be defined by our opponent. We have shown that new animal *forms*, differing as much from each other as recognized [species 'do, have been called into existence by natural and artificial selection, and that is a great step towards the solution of the mystery. It is true that these forms are capable of combining genetically, but may we not suppose that the varieties, most unlike, may, in course of ages, and after subjection to different external conditions, be so altered, physiologically as well as morphologically, that their capability of fertile inter-communication shall diminish or cease? A chemical element is to a certain extent analogous to a species ; it possesses its own intrinsic properties, yet if it be submitted to new conditions, it will be so materially altered that it will possess several new properties, and will have lost some of its former ones. Take phosphorus for example ; what can be more remarkable than the power which the red allotropic variety possesses of forming compounds with sulphur, which the other kind is devoid of? We might give similar illustrations *ad infinitum*. One thing is significant ; species can have originated in but one of two ways—creation and natural selection. A few traditions are evoked in support of the former method ; a thousand arguments from analogy support the latter. We do not say Mr. Darwin's doctrine is unquestionably the right one, but we do maintain that it is the one most in accordance with recognized facts, and that also which appeals above all to our reasoning faculties.

M. Flourens' book will afford a certain amount of satisfaction to the disciples of the old school, but it will be read by Darwinians with intense amusement.