clusions under severe and prolonged tests, such as those attempted in Fritz Müller's "Für Darwin," and in Weismann's study of the markings of Lepidopteran larvæ. As Semper pointed out long ago (and too much insistence cannot be laid upon it), the present need is not for fine-spun theory—we have theories galore—but for the judicious compilation of facts selected where the leverage will tell, facts which shall either upset or confirm—it matters not which—the theory of natural selection.

The book before us must be classed among the speculative works just mentioned; and the gist of the author's views may be gathered from the following paragraph, written in 1880 (p. 401):—"Every permanent new form (species or variety) commences with the isolation of individual emigrants, separated for a prolonged period from the habitat of some parent species which is in the stage of variability. The active factors in the process are: (1) adaptation of the immigrant colonists to the external conditions of the new habitat (nutrition, climate, soil-composition, competition); and (2) the impression and development of the individual characteristics of the first colonists upon and in their posterity by reason of the breeding between near kin. This formative process ceases as soon as, owing to rapid multiplication, the levelling and compensating effects of intercrossing make themselves felt, resulting in and maintaining that uniformity which characterizes every good species and permanent variety." Wagner's hypothesis exalts the importance of geographical isolation at the expense of natural selection, and thus approximates, both at starting-point and conclusion, to Mr. Gulick's recent theory of "divergent evolution through cumulative segregation" (Journ. Linnean Soc., vol. xx. p. 189), though in detail the respective courses taken by the two writers are by no means identical.

Consisting of a reprint of articles published between 1868–86, mainly in *Kosmos*, *Das Ausland*, and the *Allgemeine Zeitung*, the matter of the book has been long before the public, and its conclusions have been attacked from time to time by Haeckel, Weismann, Oscar Schmidt, and others; a translation of the first, and perhaps the most important article, has appeared in London (Stanford, 1873): criticism of the theory in this place is therefore unnecessary. The present reprint is edited by Wagner's nephew and namesake, in accordance with a wish expressed some time before his death in 1887, and contains, besides the articles previously published, a biographical sketch by Dr. von Scherzer, and editorial introductions; while the last 127 pages are devoted to an attempt of the editor to build certain recent discoveries, such as those of the *Challenger*, into the original structure. It is hardly necessary to say that, being a close-printed German octavo of 667 pages, the book possesses no index.

Sylvan Folk. By John Watson. (London: T. Fisher Unwin, 1889.)

MR. WATSON expresses much contempt for what he calls "the dry bones of science." We are not sure that we quite understand what he means by this expression, but it evidently does not imply that he dislikes results obtained by careful and exact observation. In the present little volume he gives ample proof that he often brings himself face to face with Nature, and that he knows how to interpret many of the innumerable signs and symbols which are readily misunderstood, or altogether overlooked, by less careful inquirers. Mr. Watson is especially happy in his notes upon the ways of birds; but he has also interesting chapters on mice, voles, and shrews, on red deer, fallow, and roe, on British seals, on British fur-bearers, and on "Nature by night." There is not much that is absolutely new in any of the information he has brought together; but his descriptions are so fresh—they suggest so vividly the idea of happy hours spent among attractive scenes in the open air—that they will give genuine pleasure to everyone who reads them. The book will be especially interesting to young readers, who will be glad to learn that it depends very much upon themselves, according to Mr. Watson, whether they shall be on terms of intimacy with the wildest woodland creatures. Mr. Watson thinks that the power of attracting wild creatures was once a much more common possession than it is now.

A Practical Guide to the Climates and Weather of India, Ceylon, and Burmah, &c. By Henry F. Blanford, F.R.S. Pp. 369. (London: Macmillan and Co., 1889.)

THE appearance of this book is very opportune. The Indian Meteorological Office has been in existence for some twenty years, and inasmuch as the region over which its operations extend comprises a very considerable area of the earth's surface, representing climatological conditions of the most varied character, a general *résumé* of the information as to these conditions is one of the most important contributions to climatology that could be made.

Mr. Blanford has well fulfilled his task. He says his work "is not addressed to meteorologists and physicists, ... but more particularly to agriculturalists, medical officers, engineers, pilots and other seafaring men, and to those others of the general public to whom the weather and the climates of India and of its seas are practical and not scientific objects of interest."

The book is divided into two parts: (1) the elements of climate and weather; (2) the climates and weather in relation to health and industry.

The former is naturally the more technical, while the latter appeals to the general public, as it gives a detailed description of the climates of the principal and most frequented hill stations, as well as of the plains, under which latter general head the different provinces or districts receive each a separate notice.

One section is specially devoted to the storms of the Indian Seas. In their discussion Mr. Blanford is a pronounced adherent of the spiral in-draft theory in contradistinction to the old circular theory and the well-known "eight-point rule."

About the most valuable chapter is the last, which is mainly occupied with rainfall and evaporation. The questions relating to these are of paramount importance for the bare existence of millions of the population. Such a famine as that of 1834 in the Doab was sufficient to induce the authorities of the day to construct the Ganges Canal, the greatest work of the kind in the world, and one which has in a great measure corrected the injurious effects of irregularity in the rainfall.

The appendixes give the tabular results of the instrumental records, which are required to substantiate the general statements contained in the previous pages.

The work is a most creditable production, and it will long remain the standard authority on any question bearing on the climate of the Indian Peninsula.

The Unrivalled Atlas. Enlarged Edition (18th). (London and Edinburgh: W. and A. K. Johnston, 1889.)

A NEW and enlarged edition of this atlas has just been published. The forty maps which it contains are well engraved and especially full of information concerning railway communication, whilst the fact that the index contains 20,000 names of places, with their latitude and longitude, testifies to its completeness. An extension of the atlas has been made by the addition of two classical maps, with an index to them, two physical maps of the British Isles and Europe, and two astronomical plates, each being accompanied with descriptive letterpress. A misleading paragraph occurs in the explanation of tidal action. We read: "The moon exerts a much greater influence on the production of tides than the sun; for, though its mass is excessively small in proportion, it is four hundred times nearer the earth." The inference that