

neutralisation of their injurious products increases, no doubt some of the now malarial swamps will be converted into thriving colonies; and so is it with physiology, when by further experiment our knowledge of the *modus operandi* of the change from the physiological to the pathological is more complete, many facts now apparently barren will bear fruit a hundred-fold.

Those who apparently with such unctuous satisfaction point to the inability of even modern therapeutics to cope successfully with certain deadly diseases, are surely supplying an argument for more experimentation, and not for less. If medicine has not derived the full benefit possible from physiological discovery, it will do so later on. But what is regarded by the anti-vivisectionists as a benefit? One of them asks quite recently, and apparently quite seriously, what benefit has accrued to medicine from a knowledge of cerebral localisation.

Mr. Paget deals with many points in detail which have formed the text of many of the more or less scurrilous essays of both varieties of antivivisectionists; he succeeds in showing that their case is only skin deep, and that when care and some erudition are applied to the elucidation of the individual instance, the facts appear in quite another light.

The last part of Mr. Paget's work is devoted to the Prevention of Cruelty to Animals Act itself. He argues, with some reason, that however efficacious the Act might have been in 1876, since then a new science, bacteriology, has practically arisen. This science for the elucidation of its problems requires a special kind of technique, simple enough, but for which the Act is ill adapted. At the conclusion of this chapter some interesting accounts are given of questions in the House of Commons concerning the working of the Act, and some interesting letters reproduced, emanating from antivivisectionists, and threatening her Majesty's ministers with political destruction if they failed to use their influence against experiments on animals. The President of the Board of Agriculture seems especially to have incurred their wrath.

OUR BOOK SHELF.

Cyclopedia of Classified Dates. By Charles E. Little. Pp. vii + 1454. (New York and London: Funk and Wagnalls Co., 1900.)

It may be doubted whether this bulky volume is of sufficient value to justify the immense amount of labour that must have been spent in its compilation. There are no less than 95,000 entries of important (and unimportant) historical events, classified geographically, chronologically, and according to their nature, so that the where, when and what of any event can be discovered. The volume is intended to be a universal history, a biographical dictionary, a geographical gazetteer and many other books combined; in short, an omniscient and international Domesday Book. The only parts with which we have any concern are the divisions of science and nature included among several other groups of events recorded for each of the seventy-nine geographical divisions, which are arranged in alphabetical order. Many of the entries appear vague and trivial, and some are misleading, if not actually incorrect. As instances of information which comes under one or other of these criticisms, the following may be cited:—1089, a widespread earthquake is felt; 1737, Dr. James Bradley discovers the variation (*sic*) of the earth's axis; 1783, Walker produces ice in summer by means of chemical

mixtures; 1783, Herschel proves the binding (*sic*) rotary motion of the stars; 1787, quicksilver is frozen without the aid of snow or ice; 1827, the spectrum analysis is worked out by Herschel; 1848, William Lassell discovers the eight (*sic*) satellites of Saturn; 1852, Sir William Thompson (*sic*) discovers the dissipation of energy; 1861, Mr. Thompson, of Weymouth, photographs the bottom of the sea; 1867, nitrous oxide gas (laughing gas) is introduced; 1881, telephotography is invented by Shelford Bidwell; 1890, the bones of a hippopotamus are found imbedded in clay; and there are many others.

But the sins of commission are as nothing in comparison with those of omission. The only events recorded under science and nature in 1894 are the meeting of the British Association, and the departure of the Jackson-Harmsworth polar expedition; in 1893, an earthquake and a flood; in 1892, two earthquakes; and in 1891, the meeting of the international congress of hygiene and demography.

Judging from these facts, no serious attempt has been made to trace the progress of science in any of its branches in latter years. From our point of view, therefore, the book is of little value. In a charitable spirit we trust its merits in other sections help to make up its deficiencies in those referring to scientific matters.

Justus von Liebig und Christian Friedrich Schönbein. Briefwechsel, 1853-1868. By Georg W. A. Kahlbaum und Eduard Thon. Pp. xxi + 278. (Leipzig: Johann Ambrosius Barth, 1900.)

THE correspondence of Faraday and Schönbein, which was noticed in a former issue (Feb. 8), finds a companion volume in the work before us, which comprises 133 letters covering a period of fifteen years. Of these letters, eighty-four are from the pen of Schönbein. The same care as regards editing and annotation which was observable in the previous volume is a conspicuous feature of the present work.

The subjects dealt with by Schönbein are chiefly those which are referred to in his letters to Faraday, more especially ozone and the work arising from his investigations of that substance. Some of the letters are more or less personal and political, and will be found very interesting reading. Liebig's letters also are replete with topics of interest in the history of chemistry, and will repay detailed consideration.

Among the subjects dealt with are fermentation, food preservation, meat extract, and agricultural chemistry. It must be remembered that the views concerning fermentation, and the bearing of chemistry upon agriculture, were at that period in the polemical stage, and this imbues Liebig's statements with special interest. Both writers also from time to time soar from the commonplace recital of facts and discoveries into the higher regions of speculation and philosophy. Liebig's views on the place of Bacon in philosophy and science are referred to by Schönbein with approval (p. 166). Schönbein's views on theory as a stimulus to new discovery (p. 216) will also commend themselves to the majority of readers.

It will be gathered from this brief notice that the volume under consideration is as valuable a contribution to the history of science as its predecessor. R. M.

Cina e Giappone. By E. von Hesse Wartegg. Translated into Italian by Captain Manfredo Camperio. Pp. 536; illustrated by 168 woodblocks, 72 plates, facsimiles of manuscripts, and one map. (Milan: Ulrico Hoepli, 1900.)

THE opening up of China to foreign commerce has naturally created a demand for books dealing with the country and its inhabitants considered from every aspect; their religion, their treatment of missionaries, their laws,