

well known has led to an unfortunate use of the terms caterpillar and chrysalis, which are here applied to the zoëa and megalopa stages of the crab.

We can understand the desire on the part of the author to bring home to the children the fact that the zoëa and caterpillar represent the larval stage in the life-histories of crab and butterfly, and that the chrysalis of the butterfly and the megalopa of the crab are also corresponding stages, but to call a zoëa a caterpillar and a megalopa a chrysalis is carrying comparison too far.

FRANK BALFOUR BROWNE.

Déviations des Compas. By Pierre Engel. Pp. vi+64; with 3 plates. (Paris: Gauthier-Villars, 1907.) Price 2.75 francs.

THE brief introduction well describes the subject-matter of the book. It is divided into four parts. The first consists of a theoretical study of the magnetic field of a ship. It is quite simple, and involves no knowledge of mathematics beyond the rudiments of trigonometry. The second part is equally elementary in its treatment, and deals with the action of the field in question on a magnetic needle, together with an outline of the principle of compensation. The third part deals with the compensation of the Thomson or Kelvin compass, while the fourth part consists of various information and remarks, both general and particular, relating to the Thomson compass. Of the plates, the third and fourth are charts of the world showing curves of equal horizontal intensity and equal magnetic inclination respectively. Ensign Engel has produced a book which should be of great use to naval officers, to whom a knowledge of the principles of the modern mariner's compass is indispensable, but to whom a highly mathematical treatment would be prohibitive.

Bulletin of Miscellaneous Information. Royal Botanic Gardens, Kew. Pp. 421+152. (London: Darling and Son, 1907.) Price 5s.

THIS volume of the *Kew Bulletin* is the second of the regenerated series. For the most part the contents are connected with systematic or economic botany. Herbarium workers have contributed lists of new flowering plants from Africa and elsewhere, reductions of the Wallichian herbarium, identifications of algæ and fungi, and special articles. The rubber boom is reflected in several articles, notably in the accounts of Guayule rubber, obtained from *Parthenium argentatum*, and of Mgoa rubber, the product of the East African tree *Mascarenhasia elastica*. Various additions have been made to the wild fauna and flora of the gardens, the most important being the list of lepidoptera compiled by Mr. A. L. Simmons. Notes on the cricket-bat willow and on gardens and parks in South Wales represent the work of members of the gardens' staff, and articles have been contributed from India and Africa by former members of the staff.

The Will to Doubt: an Essay in Philosophy for the General Thinker. By Alfred H. Lloyd. Pp. xi+285. (London: Swan Sonnenschein and Co., Ltd., 1907.) Price 4s. 6d.

THE thesis defended in this, the latest, volume of Prof. Muirhead's ethical library is that doubt is no mere negative of belief, but a positive element absolutely necessary to real life. It is true that the common-sense view of the world is full of contradictions that furnish abundant food for doubt, and that no less must be said of the more special and abstract views which constitute the sciences. But though Prof. Lloyd thus agrees with Mr. F. H. Bradley in holding that our experience at all its levels is "riddled

with contradictions," he does not follow the Oxford philosopher to his famous conclusion that all experience is therefore only of "appearance" and not of "reality." In his view, on the contrary, contradiction actually serves experience by holding it down to the real world which it would otherwise miss. It follows that the "doubter's world" must always present certain positive features which will accord with the principles of Descartes, the typical modern doubter. Among these will be found psychophysical parallelism and "the immortality of whatever is indeed real."

Prof. Lloyd's argument is interesting, and is ably, if not always convincingly, developed, but suffers from his somewhat perverse and strained efforts after brilliance of style. He has, moreover, shown more courage than prudence in choosing a title which inevitably suggests comparison of his work with that of his compatriot, Prof. William James.

LETTERS TO THE EDITOR.

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An Annotated Copy of Newton's "Principia."

IT may interest your correspondent (p. 510) to know that Le Neve, in his "Pedigrees of Knights" (Harleian Soc., 1873, viii., p. 192), states that Sir Demetrius James, of Itham, was knighted on May 10, 1665. An account of the family may be found in Hasted's "History of Kent," vol. ii., p. 247.

Much information about the preparation of the second edition of the "Principia" may be found in Brewster's "Memoirs of Sir Isaac Newton," vol. ii., p. 273 *et seq.*, but it is needless to burden your columns with quotations from so accessible a book. Two specially bearing on the point at issue will suffice:—"Even in November 1702, when he [Newton] was visited by Bd. Greves, who saw in his hands an interleaved and corrected copy of the Principia, he would not acknowledge that he had any intention to reprint it." "In a letter dated October 11 [1709], Newton intimated to Cotes that he had sent him by Mr. Whiston 'the greatest part of the copy of his Principia, in order to a new edition,' thanked him for his letter of the 18th of August, and requested him not to be at the trouble of examining all the Demonstrations, but 'to print by the copy sent him, correcting only such faults as occur in reading over the sheets,' which would entail upon him 'more labour than it was fit to give him.'"

The results of Mr. Smith's further inquiries will be awaited with interest.

W. R. B. PRIDEAUX.
Reform Club, Pall Mall, S.W., April 2.

Proposed Alteration in the Calendar.

WITH reference to the proposed alteration of the calendar so ably discussed by "W. T. L." in NATURE of March 26, it seems to me that the drastic scheme advocated by Mr. Pearce is not only inadmissible because interfering with the continuity of the weeks, but it is not the simplest scheme that could be adopted, even allowing the interference proposed.

The Positivist Calendar agrees with Mr. Pearce's proposal in that it divides the year into fifty-two weeks with a supernumerary day which is not included in any week, and with two such supernumerary days in leap years. The two calendars are also alike in that these supernumerary days are not included in any month. But the Positivist Calendar is the simpler of the two in that it makes all the months of the same length, namely, four weeks; and Blackstone informs us that in law a month means "28 days, unless otherwise expressed."