

in Oceania and elsewhere would follow the good example of this indefatigable and public-spirited German trader.

*The Story of Thought and Feeling.* By F. Ryland. Pp. 219. (London: George Newnes, Ltd., 1900.) Price 1s.

PSYCHOLOGY is not for those who require spoon-feeding. Many, however, nowadays need a rallying-point for allusions in current literature to a fashionable science, and some would fain still perturbations aroused by the self-consciousness of their children's teachers. To such Mr. Ryland offers a little book which is clear and concrete, and as condensed as possible without loss of these qualities. He confines himself to an interesting account of certain mental phenomena, aims rather at description than explanation which can be controverted, and his book is excellent of its kind. Mr. Ryland is familiar with the most modern authorities, and presents a fascinating subject-matter attractively. Mental imagery is most successfully treated. Mr. Ryland employs the selectiveness of attention inadmissibly as an argument against any form of materialistic theory (p. 22), and he is too vague on the relation of will, self, and kindred formulæ; but his story is so far a story that it in general steers clear of controversies the solution of which lies beyond its scope. It can be confidently recommended to the public for which it caters. H. W. B.

*A Primer of Astronomy.* By Sir Robert Ball, LL.D., F.R.S. Pp. viii + 183. (Cambridge University Press, 1900.) Price 1s. 6d. net.

WHILE in many respects this little book seems likely to provide a useful introduction to the study of astronomy, it is to be regretted that greater assistance is not given to those desirous of observing the heavens for themselves. Even without the aid of a telescope the beginner may easily make observations, more particularly of apparent motions, which will go far to encourage a real interest in the subject.

A wide range of subjects is touched upon, and most of the explanations are clear and concise. Many of the descriptive parts are also excellent. Some of the more elementary phenomena, however, as the phases of the moon, receive very scant treatment, and the principal astronomical instruments are neither illustrated nor adequately described. Eleven beautiful plates, mostly from well-known photographs, form the most notable feature of the book.

*Hand in Hand with Dame Nature.* By W. V. Burgess. Pp. x + 240. (Manchester: Sherratt and Hughes, 1900.)

RURAL life and scenes contemplated in an expansive frame of mind provide excuses for the publication of many pretty books. This one does not differ essentially from many others fashioned on the same model. A country scene, a general knowledge of natural history, an impressionable nature, and a certain facility in the expression of poetic sentiment, seem the chief qualifications of the contributors to literature of this kind. A preface is followed by a "prelude," a dog is "a canine friend," and its runs are "peregrinations." We also read of "larks singing in the meridian blue," the brook "which whilom rippled its pure waters over a bed of cleanest sand," "the realm of spiritual immutabilities," "the obyte of summer," and other fanciful matters. The book is not without some attractive and instructive notes on animate nature, but they are almost lost in a maze of platitudes and inconsequent remarks. The statement on p. 39 that grains of corn "have been found in Egyptian mummy-cases, from which marvellously prolific stems have been raised in this country" contains a popular belief as to the growth of mummy-wheat which has been shown over and over again to have no scientific foundation.

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LETTERS TO THE EDITOR.

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Eclipse Photography.

IN a previous letter (vol. lxii. p. 246) the writer called attention to the possible advantage of positive or reversed photography and development in the light in its application to eclipse work. Since that time very considerable improvement has been made in the methods, and it is now easy to develop, in direct sunlight, plates which have been somewhat over exposed. The pictures obtained in this way are as clear and sharp as any that can be obtained in the dark room by ordinary methods. But I have not been able to secure details on such plates that cannot be secured on a negative by ordinary means. In addition, the over-exposure needed in order to obtain a fine picture is not yet small enough to warrant the usefulness of reverse photography in eclipses.

In the measurement of the actinic values which are required to yield various results on the photographic plate, a discovery has been made which will be of value in the development of eclipse photographs. It has been found that a plate which has been over-exposed as much as two thousand times can be developed as a clear, sharp negative in the dark room. This can be done by the addition of four or five drops of saturated hypo solution to a two-ounce bath of hydrochinone developer. A half ounce of Cramer's mixed hydrochinone bath with an ounce and a half of water and five drops of the hypo solution in place of the potassium bromide, gives clear and brilliant negatives, but they are slow in developing. They can probably be developed more quickly by making the bath more strongly alkaline. With a normal exposure, the addition of two drops of hypo enormously retards the development. The plate may look perfectly clear for half an hour or more, but the picture will surely appear by giving it time and keeping the bath in absolute darkness. It may require an hour and a half or more to secure complete development. With experience, which may easily be obtained in the use of the hypo-developer, there is no need that any valuable photographic plate should ever be lost by over-exposure if a proper exposure has been attempted. If the plate cannot be replaced, and loss from over-exposure is possible, a trace of hypo should always be used at the start in the developer.

With the hypo developer it is possible to develop on a Cramer "Crown" plate, either in the dark room or in the light room, any exposure not in excess of one million candle-meter-seconds. The highest limit of exposure for the development of good negatives in the dark room is one which permits the development of positives in the light. A plate two thousand times over-exposed may be developed either as a positive or as a negative.

FRANCIS E. NIPHER.

St. Louis, Mo., January 12.

P.S.—This communication has been made somewhat prematurely, in order to direct the attention of those who will take part in the work of the next eclipse to a matter which may have great importance. It may be that the over-exposures with which I have been dealing are less than has been stated. It is, perhaps, open to question whether a fast plate under a thin positive, and exposed in a printing frame for three-and-a-half minutes at one meter from a three-hundred-candle incandescent lamp, is two thousand times over-exposed. There is, however, no difficulty in developing such a plate as a negative.

The Jamaican Species of *Peripatus*.

*Peripatus jamaicensis*, Grabh. and Ckll., was described in NATURE, vol. xvi. p. 514. At that time it was supposed that all the Jamaican specimens represented a single variable species, but the differences observed were considerable, so that the writer (*Zool. Anz.*, xvi. 341) later separated two "mutations," named *gossesi* and *swainsonae*. M. E. L. Bouvier has of late years been making admirable studies of *Peripatus* and its allies, and having procured from London and Cambridge the original Jamaican specimens, he finds that there are in reality two species represented (*Q. Journ. Micr. Science*, xliii. 755). These he classifies as follows:—