

well-selected points of view, and admirably reproduced as small quarto plates. These plates are striking illustrations of what can be accomplished by instantaneous photography as an aid to vulcanological study. Among them are very instructive views of explosive outbursts from the craters of Stromboli and Vulcano. In the case of the small explosions from the first-mentioned volcano, the ejected fragments are seen in the midst of the steam-clouds; and in the case of the more violent eruptions from Vulcano several phases in the same outburst have been caught at intervals of a few seconds. Those who already know this very interesting district will be glad to have their recollections revived by these admirable plates; and those who have never had the pleasure of visiting the South Italian volcanoes may obtain from these remarkable photographs a much better idea of the localities than any descriptions or drawings can possibly give.

Buried Cities and Bible Countries. By George St. Clair, F.G.S. (London: Kegan Paul, Trench, Trübner, and Co., 1891.)

EVERYONE knows that recent archæological research has brought to light a vast number of facts which are directly or indirectly connected with ancient Hebrew history. The object of the author of the present work is to set forth the more important of these facts, and to explain their significance. He deals with the results of exploration in Egypt, Palestine, and Mesopotamia; and he has a chapter on Jerusalem, with regard to the topography of which he has been led to conclusions different from those of other writers. The book has been prepared for the benefit of persons "who have no time to follow the course of exploration, and no taste for technical details"; and readers of this class will find in it much that will be to them both new and interesting. The value of the text is increased by good maps, plans, and other illustrations.

Food, Physiology, &c. By William Durham, F.R.S.E. (London and Edinburgh: A. and C. Black, 1891.)

THIS is the third volume of a series by Mr. Durham, entitled "Science in Plain Language." The author does not pretend to say anything new, but he has brought together, and arranged clearly, a mass of facts which will no doubt be of interest, and may be of practical service, to many readers who have neither time nor inclination for the study of more elaborate treatises. He begins with the consideration of solid and liquid foods, then gives some account of the constituents of food, and finally sketches the structure and functions of the bodily organs.

Blackie's Science Readers. (London: Blackie and Son, 1891.)

THE aim of this series is to arouse the interest of children in the common objects of the natural world, and to give them some insight into the processes by which articles of ordinary use are produced. The idea is excellent, and has been very successfully worked out. The series consists of five little volumes, the first two of which present some "lessons on common objects." From the third volume the reader will learn something about the simple principles of classification; about substances used in arts and manufactures; about phenomena of earth and atmosphere; and about matter in three states—solids, liquids, and gases. The fourth and fifth volumes—by the Rev. Theodore Wood—deal with animal and plant life. The facts set forth have been carefully selected, and they are presented in a bright, easy, natural style which cannot fail to make them at once intelligible and attractive. Good teachers will find the series of real service in helping them to foster in the minds of their pupils a love of accurate observation and independent reasoning.

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LETTERS TO THE EDITOR.

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Comparative Palatability.

WITH the view of supplementing the experiments carried out last year by Mr. F. Finn and myself (NATURE, vol. xlii. pp. 571, 572), I have been feeding, during August and September, specimens of the common frog and toad.

Among Hymenoptera, *Bombi* are readily taken by frogs. I have records of *B. lapidarius* (drones and workers), *terrestris* (queens and workers), and *muscorum* (drones and workers). On one occasion only a freely-feeding frog refused to attack for the second time a large queen of *terrestris*, which had stung its mouth. Many of the insects were, however, thus taken at the second attempt. The common wasp was eaten eagerly by frogs and toads. I was again unfortunate in not taking any *Chrysididae*. *Sirex gigas* was attacked both by a frog, for which it seemed too large, and by a toad, under whose lip it appeared to insert its ovipositor. Neither animal ventured to seize it again—certainly for an hour or so. I was then obliged to abandon the observation. I could get no large ichneumon.

Of Lepidoptera, *Vanessa urtica* was taken by frogs and toads, and *V. io* by a frog. Three or four specimens of *Pieris rapæ* and *nabi* would be taken in succession by a frog, which also ate *P. brassica*. The insects' flutterings did not seem to matter: more than once they were taken on the wing. A toad once took *P. rapæ*. I was surprised to see a frog seize a dead specimen of this butterfly, which had been lying for several hours in the inclosure. It was partially swallowed, but rejected after some seconds—having unfortunately been taken together with some cedar needles. *Plusia gamma* was eaten eagerly by both frogs and toads. Hairy caterpillars (e.g. of *Orgyia antiqua* and *Spilosoma* sp.) were taken by a frog. Smooth green larvæ were eaten greedily.

Of Diptera, *Eristalis tenax* was eagerly seized by frogs and toads. A red-tailed, long-winged fly was eaten by a frog.

Blatta orientalis was taken without hesitation; as were, of course, earthworms.

Of three frogs under observation, only one was of much working value. This specimen (a male) became in a fortnight so tame as to attempt to take the handle of the butterfly net with which I placed the insects, &c., in the inclosure. This fact recalls Mr. E. B. Poulton's observation, that his tree-frogs seized the end of the forceps with which food was given them.

It is, perhaps, worthy of notice that the larvæ of the blow-fly, though eaten eagerly by toads, are frequently passed whole from the body; and would, therefore, seem to be with difficulty digested.

Want of time has prevented my experimenting, as I had wished to do, with *Salamandra maculosa*. Mr. F. Finn offered a specimen to ducks, which will eat the small newt, and found that though more than one bird observed it, and one even ran towards it, it was not touched. The observation extended over more than an hour. E. B. TITCHENER.

Mote House, Mote Road, Maidstone, September 25.

Alum Solution.

DANS le no. 1141 de votre excellente Revue, M. Napier Draper demande pour quelle raison la solution d'alun a été universellement adoptée pour l'absorption des radiations de grande longueur d'onde. Ce n'est point pour répondre à cette question que je vous écris, car, pas plus que votre correspondant, je ne connais d'expériences directes suffisamment exactes desquelles il résulterait que la solution d'alun absorbe plus que l'eau pure. Je hasarderai, cependant, une explication: l'eau est un des liquides transparents les plus absorbants; l'alun occupe un rang analogue parmi les solides; en dehors de toute vérification, si l'absorption sélective de chacun de ces corps s'exerce sur une partie différente du spectre, on peut supposer que leur mélange exerce une absorption plus complète que chacun des corps pris isolément.

A cette occasion, je prendrai la liberté de relever une erreur que l'on a fréquemment commise dans ces derniers temps au sujet de l'absorption des radiations infra-rouges par l'eau. On a