the idea of an antagonism between animals and plants could be extended to the subject of diseases and their treatment. Quoting from Dr. Shaw's communication, we read:

> When we consider the infestations of an animal host with animal parasites, we have a markedly different picture. The host and parasite live together without any marked protective or offensive action on the part of either. When death occurs in these conditions, it is a result of the gradual destructive action of the parasite on some particular tissue of the host. The tapeworm, the liver fluke, the malarial plasmodium, the trypanosome, the filaria worm, the spirochete and the intestinal ameba may be taken as examples of this type of infesting organism. These organisms do not produce any great amount of toxins, and do not stimulate the host to form any great amount of protective substance.

I am writing the present note in order to corroborate with actual experimental data the conclusions he arrived at as a result of his lucid and logical reasoning. During the past year I have been investigating by my special phytopharmacological methods specimens of blood from two kinds of parasitic diseases. In one series of experiments, I have been examining the toxicity for plant protoplasm of blood from cases of malaria. Some of these specimens were obtained in the United States; other specimens, more particularly those from cases of virulent fever, were obtained through the courtesy of Professor R. N. Chopra, of the School of Tropical Medicine, Calcutta. The results of these experiments indicate that, as far as the phytopharmacological tests are concerned, malarial blood contains little or no toxin of any kind. Another series of experiments is at present being carried on by me in collaboration with Dr. O. R. McCoy, of the department of helminthology, Johns Hopkins University School of Hygiene and Public Health, on bloods obtained from dogs infested by the hookworm. These animals exhibit the picture of extreme anemia, and it was deemed desirable to inquire whether this anemia was of a pernicious type. Although these experiments are still in progress, the data already in hand indicate that the blood serum of dogs with hookworm shows no toxicity and behaves exactly like blood from human beings suffering from severe secondary anemias. These lines of investigation give a striking proof of the correctness of Dr. Shaw's reasoning in regard to infestations of an animal host with animal parasites.

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THE FIRST ENGLISH POPULARIZER OF SCIENCE

PERHAPS other readers of SCIENCE might be as interested in examining Oliver Goldsmith's "A History of the Earth and Animated Nature" as was the writer, who recently, through Mr. Carter Bishop, of the English department of West Virginia University, was lent an old edition of this work. This particular edition, in two volumes of more than 1,000 large pages, was published in 1853 by A. Fullerton and Company. In this edition, more than fifty years later than the first edition, the editors claim to have corrected many errors of the original work.

In the publishers' advertisement at the beginning of the work they say that Goldsmith is the "first English writer who, by the inimitable graces of his style and manner, threw a charm over the subject which was new to the English reader, and the effect of which, in rendering the science of Natural History popular, has been great and extensive."

Besides the "inimitable graces of his style" the book is illustrated with numerous colored plates, some of which are really good. The classification, though of course antiquated, is in some cases not so much out of date as might be expected of a work written 150 years ago—Goldsmith died in 1774.

In the chapter on "The Crocodile and its Affinities" he mentions the four chief types of modern texts: the crocodile, the alligator, the cayman and the gavial. He tells many interesting things about the various members of the group, some of which details are undoubtedly true, some of which are doubtfully true and some of which—for example, the "open-bellied crocodile" that carries its young in an abdominal pouch—are obviously fiction.

Altogether the book is most interesting, if *not* to be recommended for general consumption by the non-scientific public.

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QUOTATIONS

MEDICAL PATENTS

A REPORT has recently been issued by a Committee of the Association of British Chemical Manufacturers (London, November, 1929) suggesting alterations to the Patent Laws in respect of chemical inventions. Many of these suggestions will be welcomed by chemical workers as safeguarding their interests and those of the general public, and as simplifying procedure.

A large proportion of the report, however, is devoted to the question of "medical patents," *i.e.*, the patenting of chemical substances intended for the alleviation and cure of disease, and the committee make