Prevention and Control of Disease. By Francis Ramaley and Clay E. Griffin. Copyright by Francis Ramaley, Boulder, Colorado. 1913.

In the preface to the book the authors state the purpose for which it has been written. The work of investigators, physicians and public health officers should be more widely known in order that an intelligent body of citizens may cooperate in its extension. The book is intended for the general public and as a text for college classes. It is not written for medical students or biologists. After discussion of death rate, types of disease and certain hygienic considerations nine chapters, constituting almost half of the book, are given to a concise summary of the "germ theory of disease," the nature, life-history, metabolic activity and distribution of animal and vegetable parasites, the mode of infection and spread of infectious diseases, disinfection, susceptibility and resistance, immunity and specifics in the treatment of disease. One familiar with the complexity of any biological science may doubt the possibility of conveying to the general reader a conception of the nature of the objects or of the phenomena described or in the absence of a clear understanding of the subject the possibility of maintaining his interest. For those who wish this information a satisfactory synopsis is furnished. It is even more doubtful if matter described in this part of the book can be used as the basis of a collegiate course. To appreciate the form and life-history of bacteria and protozoa and the chemical changes caused by them both preliminary biological training and objective demonstration of selected forms may be regarded as essential. Study of the phenomena of immunity including the intricacies of Ehrlich's side-chain theory or of phagocytosis and opsonic action must be relegated to the biological student who wishes to acquire technical training and superficial information may leave the impression of occult mystery in the mind of the general reader. The book contains a large amount of information which the layman should have and it is presented in interesting form. The statements concerning medical practise are generally accurate, but occasionally an indefinite or erroneous impression is produced. Advice to eat moderately at the beginning of a "cold" may be worth heeding, but its value is not strengthened by the suggestion that side-chain receptors become coupled to toxins when intoxication takes place and the body is unable to assimilate food until new side chains are developed. The cause, dissemination and prevention by personal and governmental precautions of "cold," diphtheria, contagious diseases of childhood, tuberculosis and other diseases are adequately discussed. The value of vaccination and of the serum treatment of diphtheria is emphasized with the purpose of overcoming lingering prejudice. As an illustration of desirable information which may aid the layman to judge his professional attendant may be cited the author's discussion of the importance of surgical cleanliness on the part of dentists. Historical data defining the changes that have occurred in the prevalence of certain diseases or describing the progress of medical discovery add interest and clearness to the book.

E. L. Opie

SPECIAL ARTICLES

ON INDUCING DEVELOPMENT IN THE SEA-URCHIN (ARBACIA PUNCTULATA), TOGETHER WITH CONSIDERATIONS ON THE INITIATORY EFFECT OF FERTILIZATION[1]

I. THE INITIATION OF DEVELOPMENT WITH DILUTE SEA WATER

In the course of work on the energetics of development, it became necessary to study in detail the question of water absorption at various stages of embryogeny. For certain phases of these studies the eggs of *Arbacia punctulata* proved extremely favorable. In various concentrations of sea water these eggs behave exactly as expected, but in 25 per cent. sea water (25 c.c. sea water + 75 c.c. H_2O dist.) fertilization membranes appear. The process takes place in from one to one and a half minutes at ordinary temperatures. In two minutes many eggs as well as their nuclei

[1] Preliminary communication.