

ington, where Mr. Gavett saw it, it must have been nearly 2,500 miles long.

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MONKEYS AS COCONUT PICKERS

E. W. GUDGER has recently called attention in *SCIENCE* to the use of monkeys as coconut pickers. The Malays and Bataks of Sumatra very commonly use monkeys in this way. The current English name there for the monkeys, *Macacus Nemestrinus*, is "coconut-monkey." The work of picking the nuts is performed in a way essentially the same as that described by Shelford and quoted by Gudger.

These monkeys not only work, but have a considerable commercial value as laborers. The price of a trained coconut monkey ranges from about \$8.00 to \$20.00; a price far above that put upon other common sorts of monkeys which are kept only as pets.

Coconut monkeys grow to a considerable size, and are very strong. They are also, usually savage, and will inflict a nasty bite whenever they have a chance.

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KISARAN, ASAHAN, SUMATRA

SCIENTIFIC BOOKS

Vital Statistics: An Introduction to the Science of Demography. By GEORGE CHANDLER WHIPPLE. New York, John Wiley and Sons. 1919. Pp. 517. \$4.00 net.

Vital statistics have developed slowly in the United States. In spite of much progress in recent years, official records, including federal, state and municipal, still lack much in extent of the field covered and in detail of treatment. A nation-wide registration area for the recording and analysis of the elementary vital phenomena of birth and death is still unattained. A number of states and many of our cities of good size and of undoubted prosperity and economic development make no serious effort to collect the facts of their vital resources. It is no wonder then that we, in America, have lacked adequate text-books and competent teachers for the instruction of those interested in the science of

vital statistics. Physicians who would profit most from knowledge of the subject receive virtually no instruction in this science. Health officers, in like manner, have only, within the last few years, awakened to the value of vital statistics as a mechanism in their work and only a few are competent to use it effectively.

Professor Whipple's book will, therefore, help to fill a long felt want. It is, frankly, a book for health officers. It is not intended for advanced students as a contribution to the method of statistics. It is rather a guide to those who would be familiar with the simplest methods as applied to the public health field. Only Dr. Newsholme's volume on vital statistics (now out of print) has been available for English readers during the last three decades. The present book, perhaps altogether more attractive in its mode of approach, will now serve American students and will present recent, often current, data concerning their own country.

The book may be divided into two parts; the first covers the technique of practical statistics, the second discusses the phases of vital phenomena of populations. The appendices give a rather incomplete bibliography, the model law for reporting diseases, births and deaths and logarithms of numbers up to 10,000.

The first section, pages one to ninety-nine, is a useful first aid to the student of the methods of crude statistical description. The usual devices and methods are described clearly and even pleasingly. This is obviously Professor Whipple's *forte*. He, as a sanitary engineer, has given proper place in his own writings to the graphic methods and to other attractive means of clear presentation of statistical materials. The student will, however, unless he carries his studies much further than the text, find himself only at the threshold of statistical method after he has covered this first part. Perhaps this is all that is intended by the author, who assumes no special mathematical skill or equipment on the part of his students. This section would ordinarily have given the greatest

difficulty in presentation. Professor Whipple has made it an attractive group of chapters, well written and even interesting.

Pages 100 to 458 are, in effect, a discussion of American demography. The chapters cover the methods of enumeration and registration; the characteristics of population; death rates, birth rates and marriage rates; specific death rates; causes of death, with especial reference to particular diseases and for specific age periods. Three chapters entitled, Probability, Correlation and A Commencement Chapter close this section of the book.

The elementary facts of the vital statistics of the United States are clearly presented in the above chapters. In fact, the author makes a special effort to hold his reader by simplicity, clearness and force of statement. Professor Whipple's book will not prove a difficult one for the student. It does not attempt too much along lines of thoroughness of treatment. Only the high spots are touched. Therein lies its value and perhaps also its danger. For while this book will undoubtedly increase the skill of the health officers in the presentation of their reports, it may also give many a feeling of competence greater than is justified by their skill. One would have wished that tuberculosis, cancer and a few other of the more important diseases had been treated more thoroughly in the light of recent contributions on these diseases. These could then have served as general models for the discussion of diseases as causes of sickness and death. In fact, the author has paid too little attention to the very important subject of the classification of the causes of death. This should be a vital matter to all health officers if they are to publish accurate statistics of the mortality of their respective communities. It is also characteristic of this book that the discussions are somewhat disjointed, perhaps because of the desire of the author not to overstrain the attention of the reader. We often find a subject treated in a number of places where a more continuous discussion would have left a clearer impression.

Altogether, this is a useful first course

which, under competent laboratory instruction, should add materially to the popularity of vital statistics among health officers and others engaged in developing the public health movement in the United States. Professor Whipple will have earned the gratitude of those engaged in public health work if the book does what is hoped for it. This may be some compensation for the time which he, as a busy sanitarian, must have taken from his work in order to have made this text-book possible.

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A HISTORICAL NOTE ON THE SYNCHRONOUS FLASHING OF FIREFLIES

THE interesting accounts of this remarkable habit published in *SCIENCE* during the past two years by Professor E. S. Morse and others have led me to make notes of similar accounts found in working up certain books on the East Indies and New Guinea. The excellent summary of our knowledge of this striking phenomenon published in *SCIENCE* for July 26, 1918, by Professor Morse, and the later communication from Mr. George H. Hudson led me to believe that these historical data may be of interest and possible value to those studying this habit in insects.

The first of these accounts was found in Robert W. C. Shelford's book "A Naturalist in Borneo" (London, 1916), a work replete with natural history data of great interest and value. At the time that I made a note of Shelford's observations, I had forgotten that Professor Morse in *SCIENCE* for September 15, 1916, had published Shelford's account from advance proof sheets of his book.

The next account I have chanced upon is from the pen of Nelson Annandale, the well-known zoologist of Calcutta, India. His paper, "Observations on the Habits and Natural Surroundings of Insects," made during the "Skeat Expedition" to the Malay Peninsula, 1899-1900 was published in the *Proceedings of the Zoological Society of London*, 1900.